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textile bulletin

NOVEMBER • 1957

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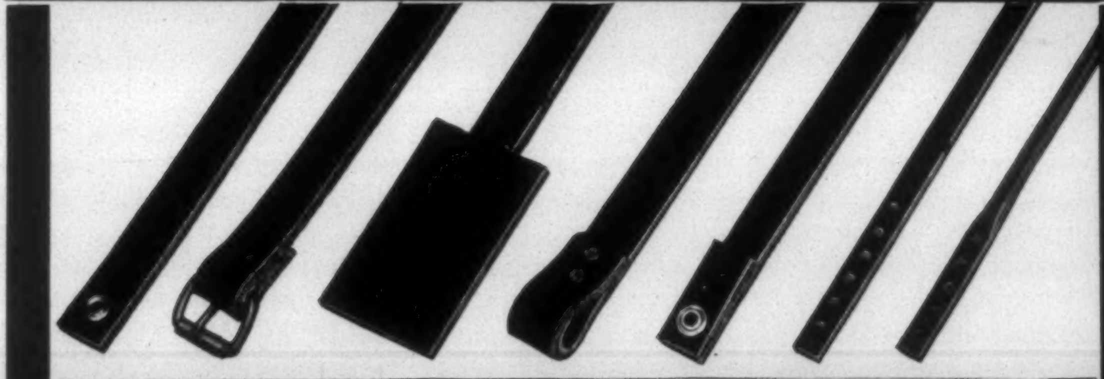
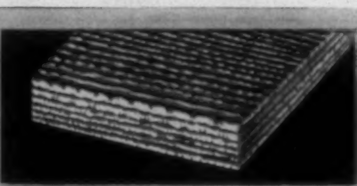
BULLETIN is published
thl by Clark Publishing
21 West Morehead St.,
rlotte6,N.C. Subscription
per year in advance, $2
two years. Entered as
ond-class mail matter
ch 2, 1911, at Postoffice,
lotte, N. C., under Act
Congress, March 2, 1897.

PA NBP





JACOBS ENGINEERED Rubberized Fabric Straps step up loom production

AN ENGINEERED PRODUCT:

Pre-stretched and treated for flexibility and **minimum of adjustment.** Unequalled in resistance to oil and heat, strength and long life. Uniform in thickness.

Available: 5 ply—5/32" thick
Available: 7 ply—7/32" thick

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Immediate delivery in any width or shape.

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DIVISION
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...to Modernize Your Mill with New American Textile Machinery ...NOW

Today, American textile machines of all types are at an all-time high in adaptability of design . . . versatility of use . . . quality and quantity of production.

Never has any textile mill been able to get so much for so little.

And never has competition been so tough. Never has outdated equipment been such a liability, such an open invitation to diminishing returns.

Yet surveys show that a dangerously high percentage of pre-war equipment is still in use today.

What are you waiting for? The time is right. Prices are right. Terms are right. It's high time to modernize, *now* . . . for the future of *your* mill.

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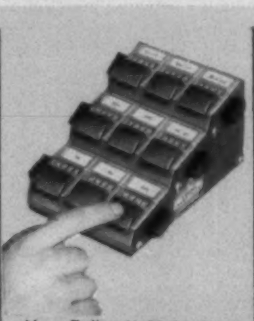
. . . and here's why it's wise to make sure all your New Machines are equipped with

NEW VEEDER-ROOT COUNTERS . . .

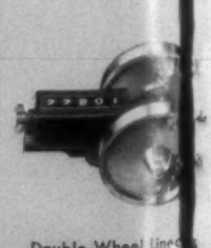
Modern Veeder-Root Counters . . . for looms, frames, knitting machines and all types of textile mill equipment . . . are built with unmatched Veeder-Root know-how and quality to give accurate facts-and-figures through years of trouble-free service. Count on Veeder-Root for *closest* Countrol of production and uniformity. Write Veeder-Root for all your counter

2-3-4 Convertible Counters for looms, frames, knitting machines, etc.

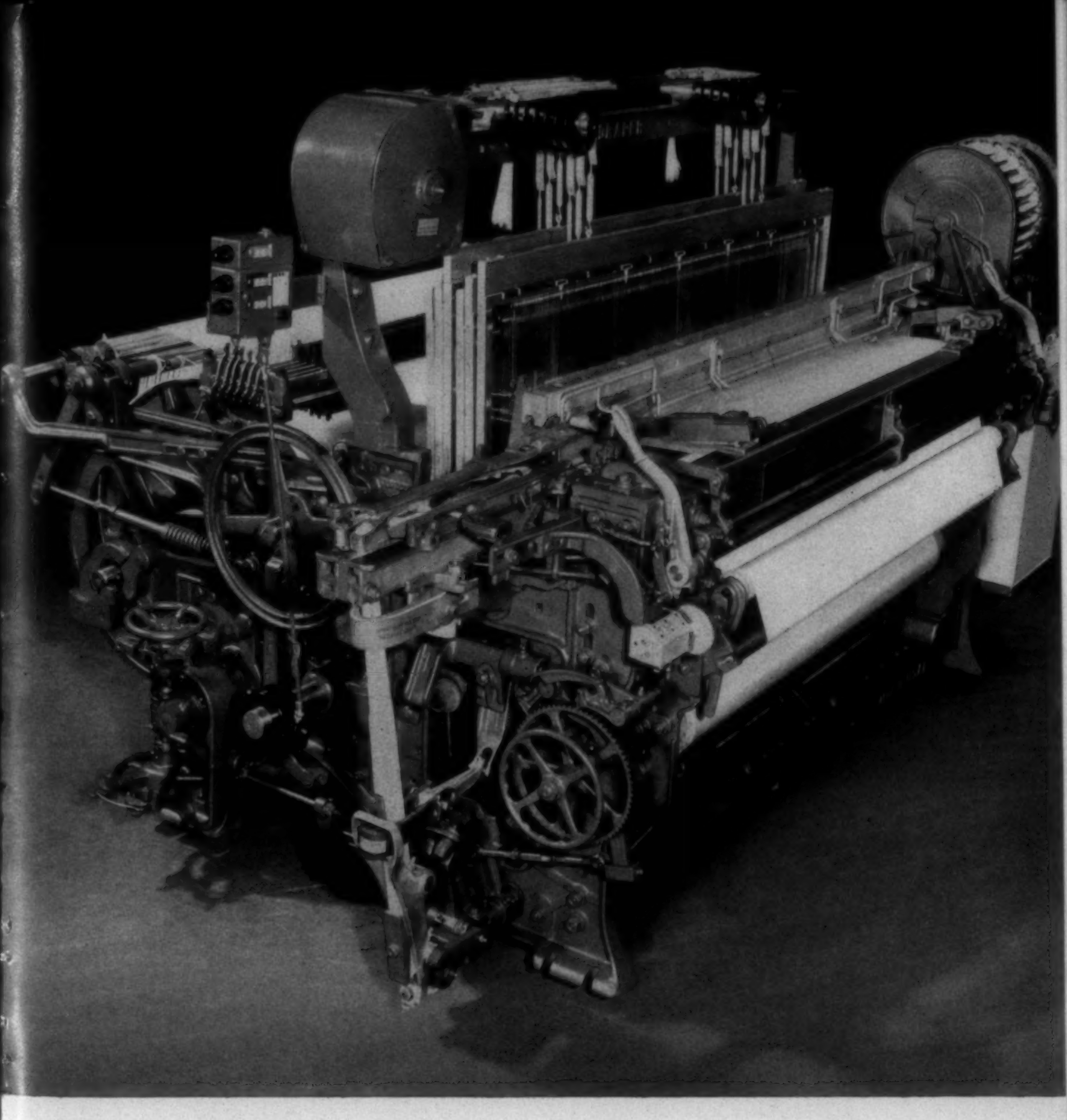
Loom Cut Meters for controlling uniform cuts of cloth.



Vary-Tally Multiple Unit Reset Counters for inventory, inspection, and 1,001 other hand-counting jobs.



Double-Wheel Line
Counter for indicati
lengths in feet, yards,



This loom gives you all the competitive advantages

Long range flexibility, practical and economical operation, higher production, increased efficiency and a new low in maintenance cost are major benefits offered by the new Draper X-2.

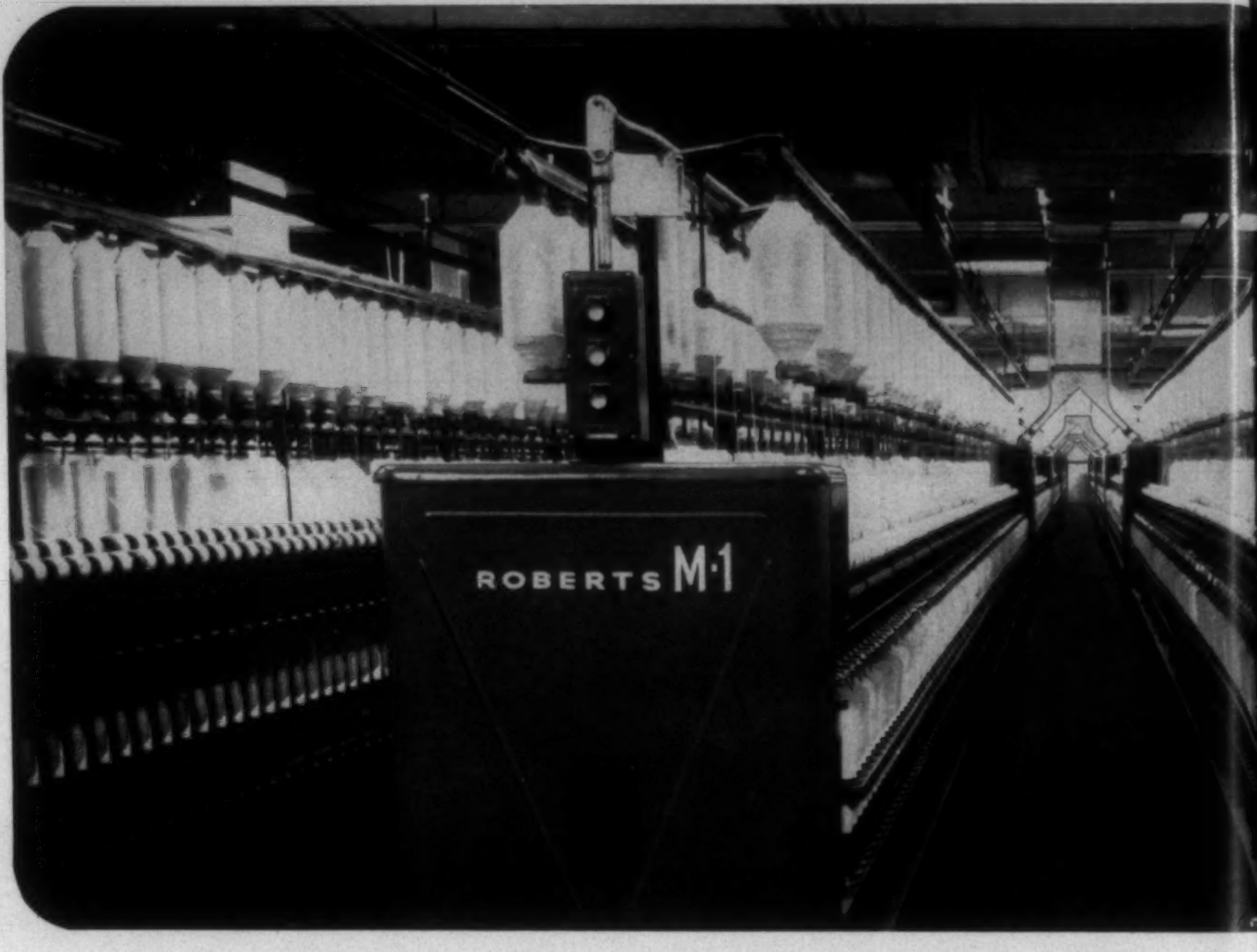
The changing fashions in cotton and synthetics create a need for a loom which can be converted on short notice to weave a wide variety of fabrics.

The X-2 with its ability to weave cottons or synthetics equally well, answers this conversion problem.

The combined advantages of the Draper X-2 mean . . . higher mill profits.

DRAPER
CORPORATION

Hopedale, Mass. *Atlanta, Ga.* *Greensboro, N. C.* *Spartanburg, S. C.*



ROBERTS SPINNING

Today's standard for production, yarn quality and investment

Roberts Spinning is setting today's standard for comparison in high drafts, package sizes, roving bobbin sizes, front roll speeds, ends up, yarn break factor—and at the lowest investment cost per spindle.

TRIED AND PROVEN. The Roberts M-1 Spinning Frame is simple and straightforward, free from radical innovations or gadgets. Its design has already been tried and proven in many successful applications. It embodies all the ball bearing features most wanted in a modern spinning frame, giving highest production and lowest maintenance.

ROBERTS DRAFTING. Roberts Double-Apron Drafting produces highest break factors, best yarn evenness and lowest ends down in a range of drafts from 10 to 60, for yarn numbers from 2's to 100's, in cotton, synthetics with staples up to 3 inches long, or blends.

LARGE PACKAGE FLEXIBILITY. One basic model of the Roberts M-1 Spinning Frame is adapted to run warp bobbins with lengths from 10 inches to 12 inches as well as filling quills. Standard gauges from 3 inches to 4½ inches can be arranged to employ the maximum desirable ring size suitable for the yarn number and twist constant.

RUGGEDNESS WITH SIMPLICITY. The frame chassis is of rugged construction. The working motions use ball bearings for every turning and oscillating motion where practical. The all-ball-bearing head design is outstanding in its simplicity and flexibility. All gears in the head are hardened and have one pitch, one width, one bore and one keyway, making them completely interchangeable. Greased-for-life bearings are used in the head and all plain bearings and studs are eliminated. Draft and lay constants are adjusted simply over the complete range of yarn numbers.

STANDARD FEATURES. Standard equipment includes Roberts Ball Bearing Spindles, Roberts built-in UnitVac Suction Cleaning. Roberts AeroCreels are available in every desired package size, single or double.

Part of a spinning room in a mill with over 100 Roberts 25-inch Spinning Frames.

ROBERTS SPINNING AVAILABLE IN 3 FORMS PROVIDES MODERNIZATION AT LOWEST COST

The cost-cutting, performance, and quality features of Roberts Spinning can be obtained through changeovers to the mills' existing spinning frames, or through rebuilt frames supplied by Roberts, as well as Roberts M-1 Spinning Frames. Roberts Proposals for Spinning Modernization provide comparison on these 3 methods.

CHANGEOVERS to the mills' existing machinery can include drafting systems, spindles, creels, suction cleaning, tape drive, gearing, or any combination of these to provide the maximum return for minimum expenditures. Performance equal to new can be built into mills' existing machinery if desired in every manner and form.

ROBERTS MODEL 55-R REBUILT FRAMES provide complete new spinning performance making use only of non-functional support members of older frames, thus affecting a substantial savings and taking advantage of the all-new spinning performance and features identical to all-new frames.

ROBERTS M-1 SPINNING FRAMES are excitingly new from the ground up, with all ball bearing features. They are available in 39 inch, 36 inch, and the space-saving 25 inch widths.

ROBERTS COMPANY

SANFORD, NORTH CAROLINA

ROBERTS SPINNING ★ NEWS ★

TOP ROLL SUSPENSION USES BALL BEARINGS IN ALL THREE LINES

The Roberts Ball Bearing Top Roll Suspension System uses double-row ball bearings in front, middle and back lines and incorporates many other important design advantages.

Cots have ½" hole diameter, revolve together making lap removal simpler, and are buffed on standard equipment, without attachments. Full length revolving clearers are used.

Front and back rolls are interchangeable making sequence buffing possible.

The double-row bearing raceways are ground directly into ½" shafts. Bearings are grease-packed for life and a 2-piece labyrinth seal protects them from lint entrance and roll picker damage.

The system has controlled self-alignment. Conventional deadweighting or new spring weighting is optional.

An alternate arrangement also available employs a ball bearing top roll and special suspension on the front line only with Roberts Cap Bars and solid top rolls on middle and back top rolls.

Roberts also continues to offer its No-Oil Cap Bar and Saddle system for all three lines, now installed in more than 2½ million spindles.

ROBERTS M-1 SPINNING FRAMES MADE IN THREE WIDTHS

Where it is desirable to match frame widths already in the mill, Roberts makes and incorporates all of its design features of its new frames in standard 36 and 39 inch widths. All the ball bearing features and details are built into these wider frames.

The Roberts M-1 25 inch wide Spinning Frame permits 5 frames instead of 4 in a 25 foot mill bay, retaining 30-inch aisles and increasing yarn production 25% in the same place.

Creel designs have been arranged for the frames to handle 12 by 7 roving packages on as low as a 3-inch gauge frame. 10 by 5 double creels are designed for 3½ inch and larger gauges. In all cases, widths and heights of creel are not excessive with consideration being given for ease of creeling for the operators.

ROBERTS "TURNKEY" ERECTION SERVICE

Roberts "Turnkey" Erection Service is available in all 3 modernization arrangements: buying complete new spinning frames, buying modernized frames, or changing over the frames on your floor. In each arrangement, Roberts is entirely responsible for installation and performance.

First Choice

for new permanent finishes

Penford Finishing Gums*

FOR

COTTON DENIMS,

CHAMBRAYS,

GINGHAMS,

ETC.

These highly substituted starch ethers are very reactive with the latest thermosetting resins used to obtain permanent starch-resin textile finishes.

Penford Finishing Gums cross linked with resins impart a permanent hand durable to repeated laundering—and dimensionally stabilize fabrics. This new finish provides improved crease recovery characteristics, increases abrasion resistance, and reduces the loss of tensile strength usually accompanying resin applications.

Our Technical Sales Service Engineers are available for consultation on finishing problems to recommend the specific Penford Finishing Gum formulation to best fill your requirements. Literature available upon request.

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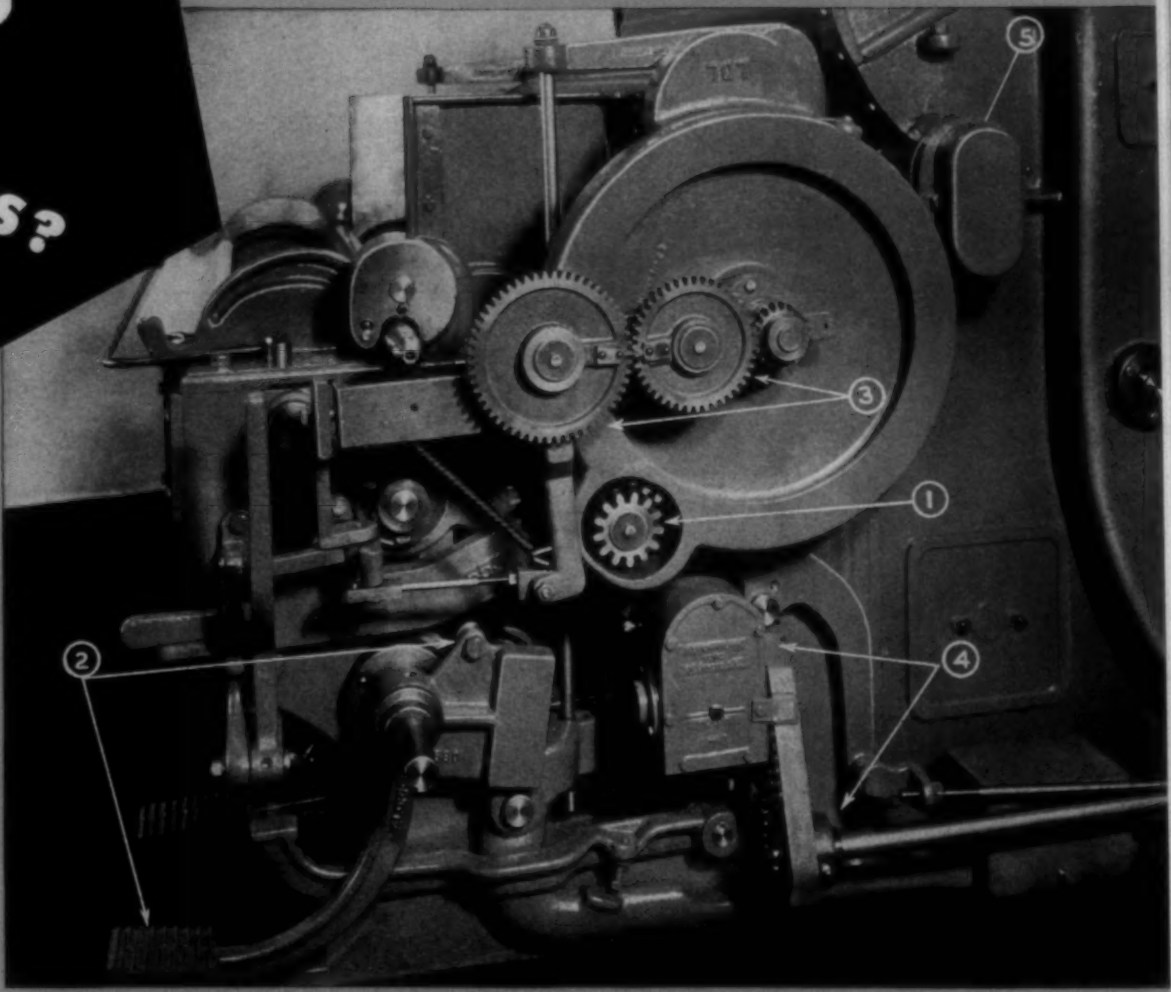
*U.S. Pat. Nos. 2,516,632
2,516,633; 2,516,634

Manufacturer of Douglas Pearl STARCH — Douglas Crown Thin Boiling STARCHES — Douglas Oxidized STARCHES — Clearsol Gums — and Douglas Dextrines for the Textile Industry.

NEED NEW PICKERS?



① Cut steel drop-shaft gear where sand-tooth cast iron gears are usually used. All spur gears on an Aldrich picker are cut.

② The powerful starting pedal, providing tremendous leverage for positively engaging the drop-shaft gear.

③ The Stop-Motion is out where you can get at it for quick resetting. The guard is open at the bottom for easy access.

④ The really silent side-shaft drive, providing any desired speed changes. The drive and side-shaft run on ball bearings.

⑤ Self-aligning Oilite draw roll bearings.

AldricH MachinE WorkS

Greenwood, South Carolina

Why new Dayco AP 664 Aprons improve yarn uniformity

. . . give trouble-free drafting

Smoother operation is the reason new Dayco AP 664 Aprons draft more uniform yarn, either natural or synthetic. Newly developed, highly flexible compounds eliminate drag around the nose bar, even on the latest super-draft systems.

Semi-gloss pink inner surface gives far lower coefficient of friction. This reduces chatter — indication of jerky, uneven motion around the nose bar. Non-stretch, pliable cord body assures maintenance of uniform apron tension for surer drafting control.

All through the long life of the new Dayco Apron, the compounds in the light blue drafting surface maintain just the right coefficient of friction for improved fiber alignment. Special ingredients prevent lint from coating the surface, therefore the drafting surface always remains the same.

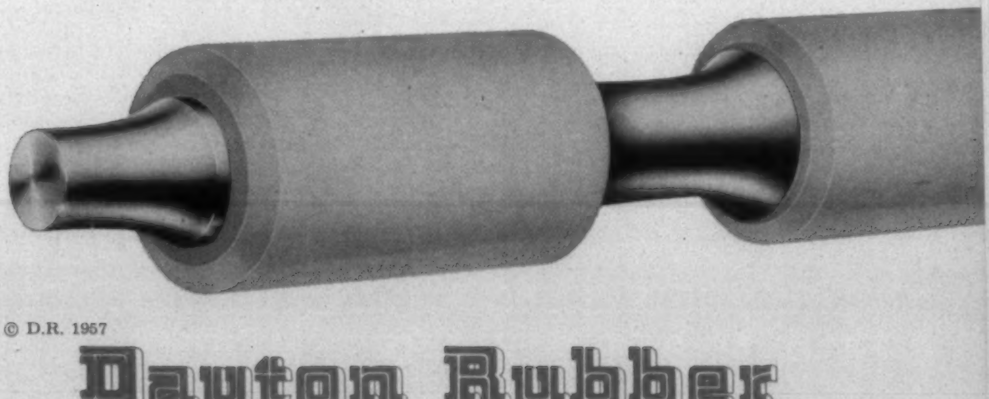
Compounded of materials which stubbornly resist chemicals or oils, Daycos instantly resume quality drafting after shutdowns. They are not affected by heat or humidity, nor will they take a permanent set. Flipped and broken aprons are a thing of the past. Dayco Aprons are available for both single and double apron systems.

Your Dayco Representative will be in soon to give you full information on how new Dayco AP 664 Aprons will improve the quality of every yarn. Or write The Dayton Rubber Company, Textile Division, 401 S. C. National Bank Bldg., Greenville, S. C.

For even greater drafting control—

New Lap-resistant Dayco EW 661 Cots offer these advantages:

- Stay dry and solid despite heat and humidity
- Dissipate static • Resist all known oils



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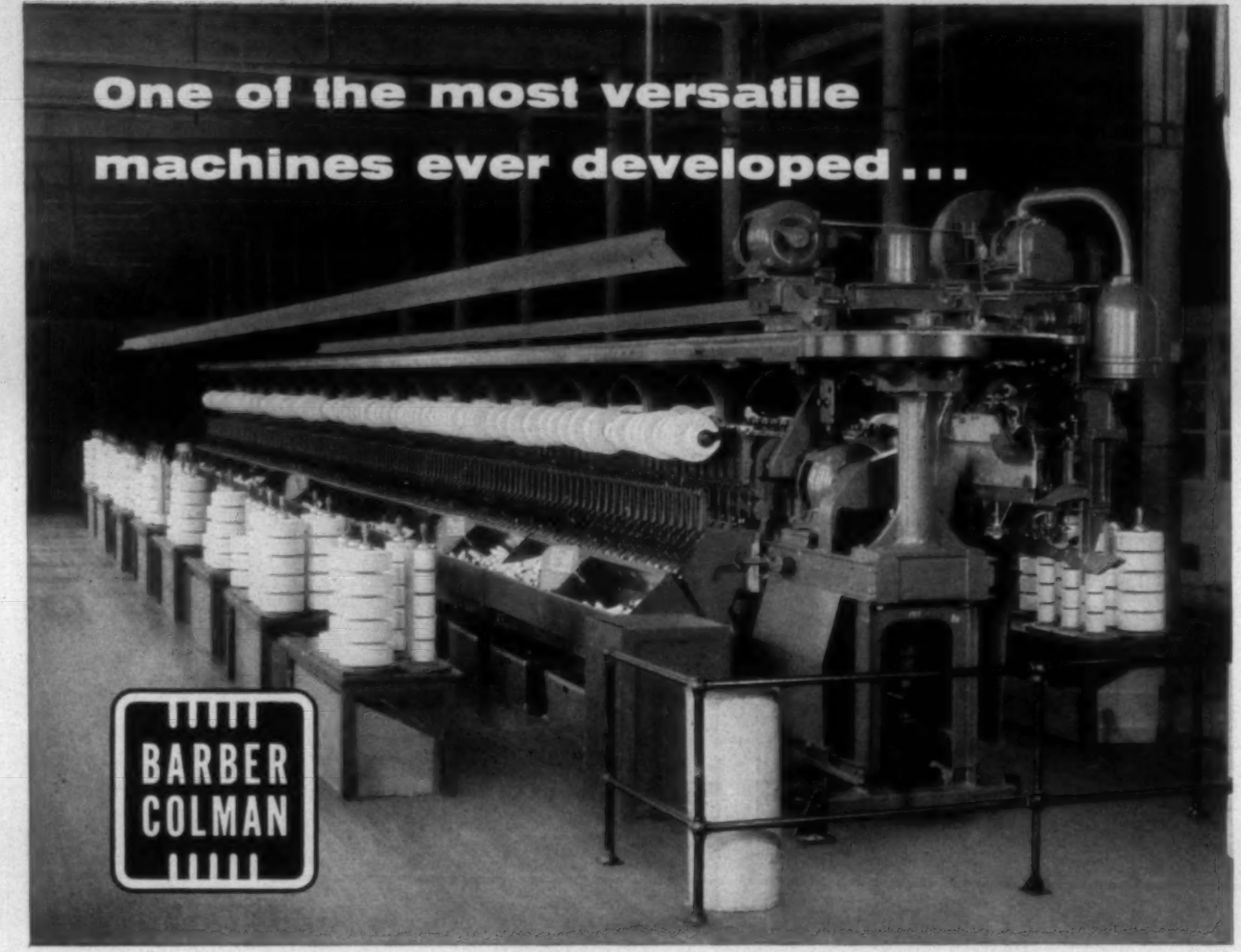
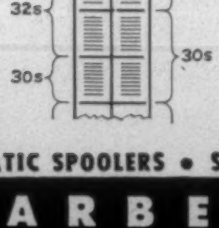
Dayton Rubber

Dayco and Thorobred Textile Products for Better Spinning and Weaving



MULTIPLE-COUNT SPOOLER



Sale yarn mills and producers of piece goods that use various counts of different mixtures will find that this machine can be a very profitable investment. It is the famous and familiar Barber-Colman Automatic Spooler, but now you can wind . . .

A DIFFERENT COUNT EVERY 9 UNITS

The machine is built in "bays" between posts that support the traveler track, with nine bobbin-to-cheese winding units in each side of each bay. Empty bobbins, instead of being conveyed to a single sorting table, drop into separate boxes under each bay, thus enabling each group of nine units to be loaded and run with a different yarn. Starter boxes and cheese tables are set up individually for each bay. The only limitation is that the extremes of different counts on the machine at any one time must fall within the range of the knotter in the traveler. Changes can, of course, be readily made at any time, and any number of bays can be run on identical yarns. (Note the dividers between the bobbin trays on the machine shown above.) *Full details on the many adaptations of this versatile machine can be obtained from your Barber-Colman representative.*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

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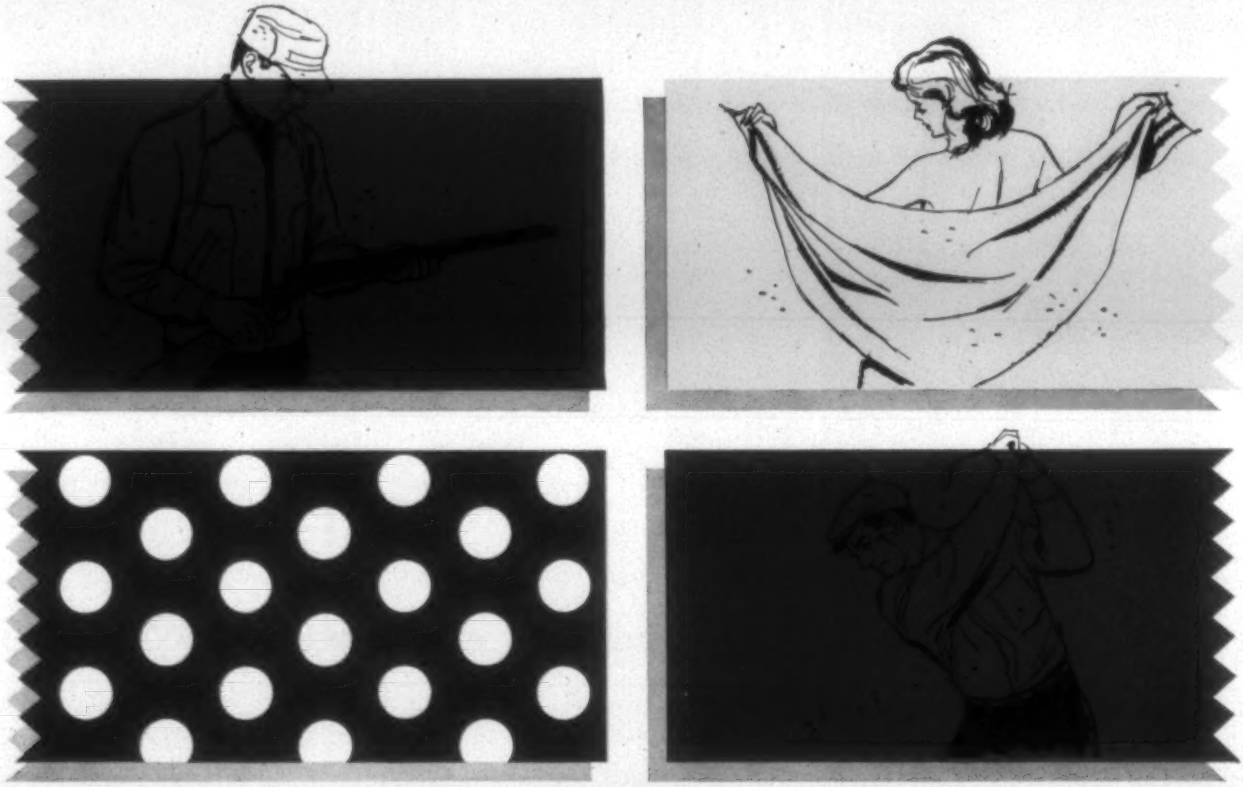
use **NAPHTHOL DYES** by gdc



for deep, brilliant shades—all around color-fastness—high productivity at low cost

Bright reds and yellows, deep rich navies, browns, wines and blacks either too difficult or expensive to achieve with other dyes are simply and inexpensively produced with GDC Naphthols in cotton and rayon, in pad, jig or continuous systems. Acetate, Dacron* and nylon may be dyed by special processes.

Naphthol colors are fast to washing, light, chlorine, alkali and cross-dyeing. Many Naphthols are used as ground colors for discharge printing where wash- and light-fastness are required.

A complete range of highly soluble Naphthol Powders are available. However, for greater economy in high-speed, large-volume operations the prepared liquid Naphtholate AS Solution brands are generally preferred.

The Fast Color Salts and Bases used for development are reliably uniform from batch to batch and most are nondusting for cleaner handling.

Our Technical Service Laboratories are ready to advise you on how to utilize Naphthol dyes in your particular operation.

*Polyester fiber of E. I. du Pont de Nemours & Co. (Inc.)

From Research to Reality

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A SALES DIVISION OF
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GENERAL ANILINE & FILM CORPORATION
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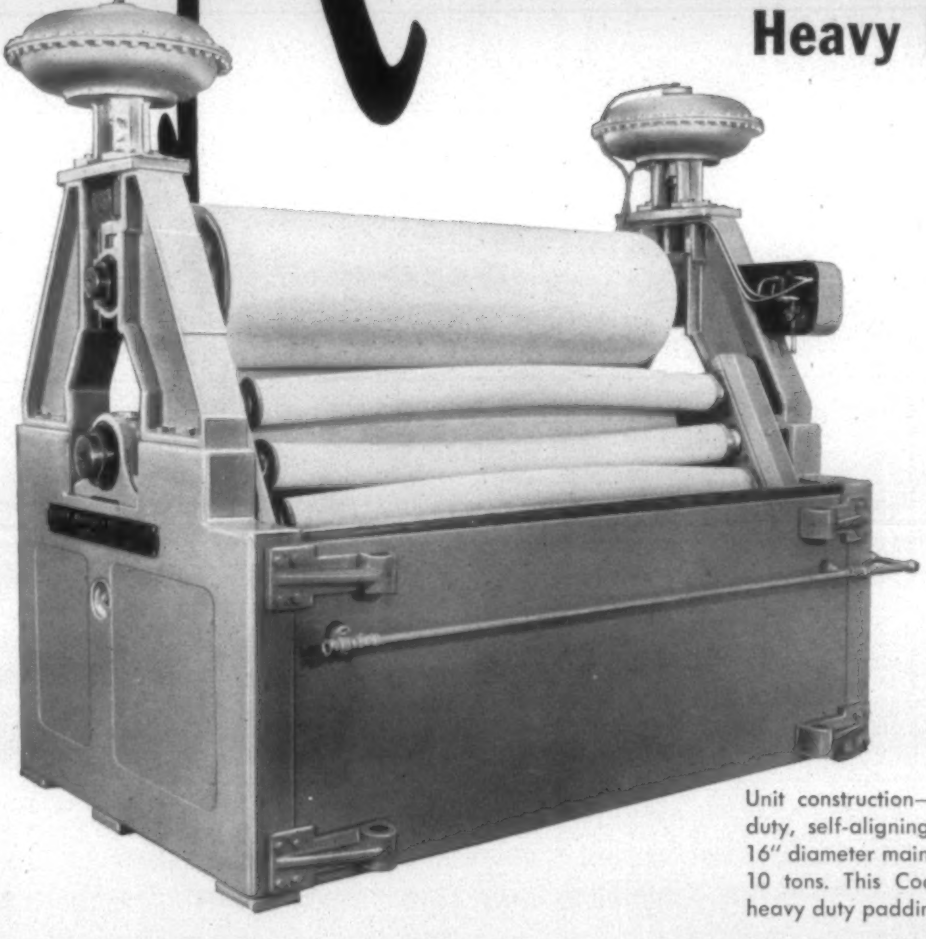
Naphthol Dyes manufactured by the General Aniline and Film Corporation are sold outside the United States under the trademark "Fenaphtol."

Announcing

Cocker's Unit Construction Heavy Duty Padder



Unit construction—heavy cast iron frames—heavy duty, self-aligning roller type roll bearings—and 16" diameter main rolls permit direct loading up to 10 tons. This Cocker machine is unexcelled for heavy duty padding of dyes, starches, and finishes.

Either low or high capacity 3/16" stainless steel jacketed pans can be furnished with open or with closed coils. Integral mounted expander rolls and cloth guides attached to the machine can be furnished with open or with closed coils. Integral mounted expander rolls and cloth guides attached to the machine can be furnished if desired. Available in widths up to 120 inches.

We will be glad to give you full information on this new Cocker machine.

THE LEADER AROUND THE WORLD

COCKER

Plant and Offices at Ranlo, N. C. (Mailing address, Gastonia, N. C.)

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE
WARP PREPARATORY EQUIPMENT

DRAPER "MIRROR-GOLD" RINGS

Improve break-in schedules with new "Mirror-Gold" rings

Mill tests prove that the new *"Mirror-Gold"* ring improves break-in schedules while *retaining all the advantages* of the famed DRAPER mirror-finish ring.

Identified by its golden color, this new ring increases Traveler life and reduces ends down.

For the maximum in ring economy, performance and service . . . specify DRAPER *"Mirror-Gold."*

DRAPER CORPORATION

Hopedale, Mass.

Atlanta, Ga.
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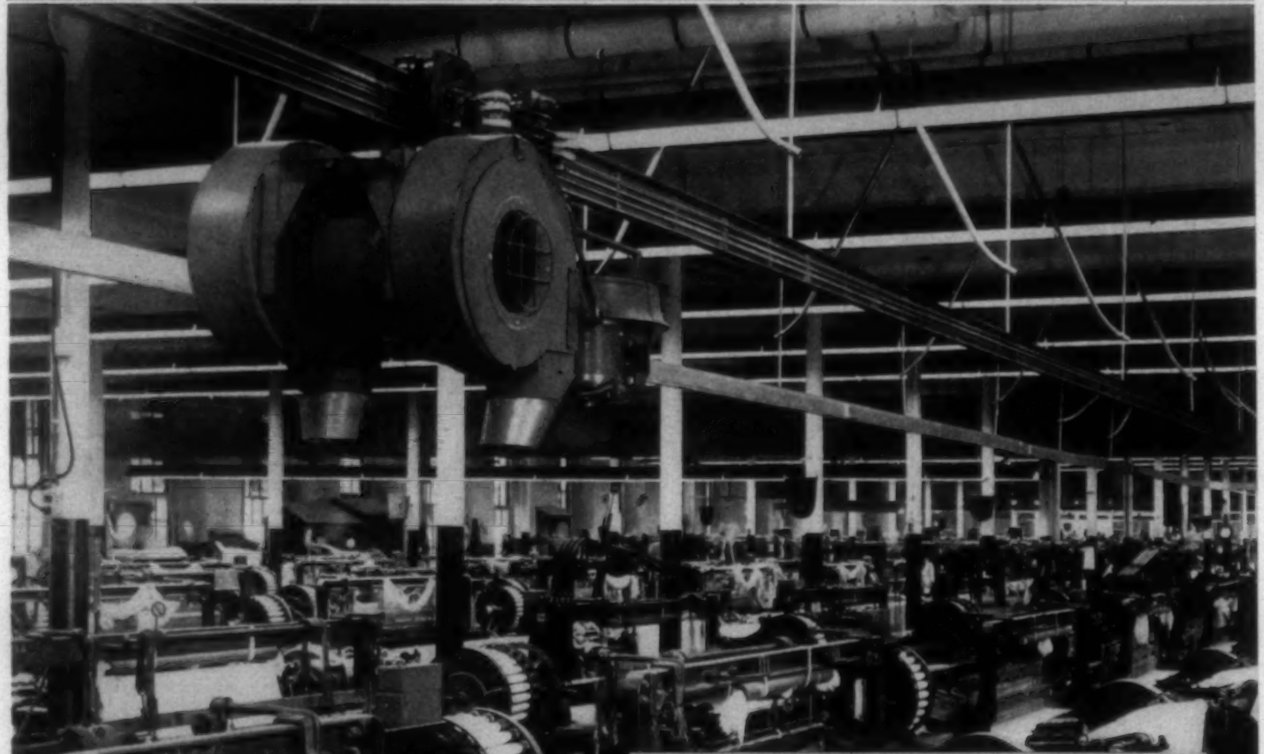
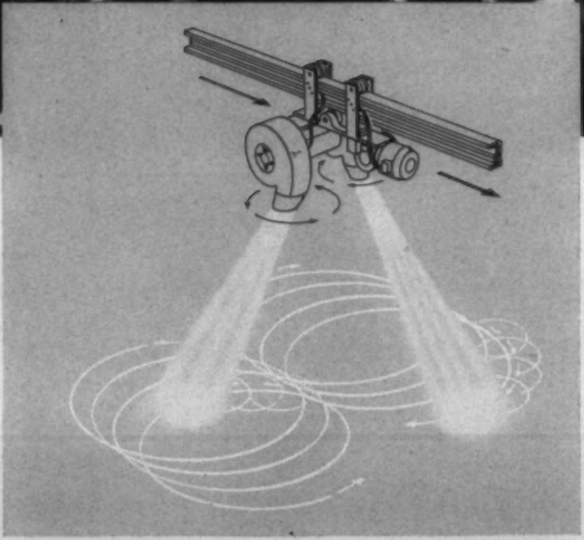
Amco Introduces its New

Heliclone Loom Cleaner



Provides automatic, continuous cleaning of looms and ceiling • Drastically cuts cleaning costs • Steps up production • Improves quality of fabric • Reduces fire hazard • Improves weave room appearance • Boosts employee morale • Can be incorporated with beam handling equipment.

Write for further information, or ask to have an Amco engineer call.



Swiftly whirling outlet nozzles, driven by the air stream, direct the air jets at an acute angle in overlapping, circular paths. The result is a rapid series of high-velocity bursts of air over loom and warp surfaces for complete cleaning action.

AMERICAN MOISTENING COMPANY ***Air Conditioning Systems and Textile Mill Equipment***

Executive Offices: Cleveland, N. C. Branches in Atlanta, Boston, Camden, Providence, Toronto

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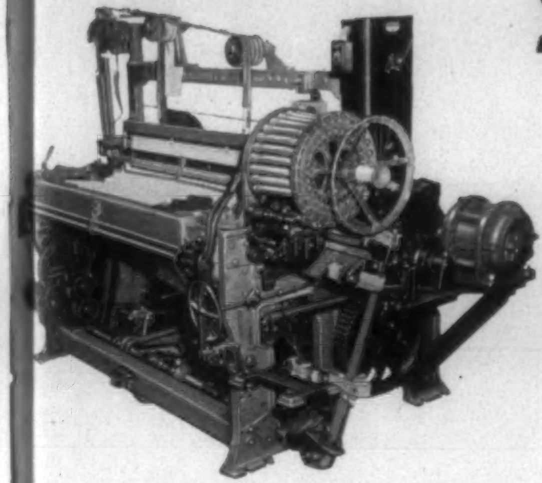
presents



The REINFORCED
DURAWELD
PICKER STICK

with this Unexcelled Combination . . . . .
Strength and Whip, plus Resistance to Warping

Here is another Stehedco *exclusive* . . . a picker stick that gives you advantages never before available.

★ DURAWELD Picker Sticks are made of multiple laminated veneers of *high grade hickory* reinforced with veneers of vulcanized fiber, permanently bonded with phenolic adhesive into a uniform panel.

★ This construction gives DURAWELD Picker Sticks far *greater strength* while retaining the desired *"whip"* for high-speed looms.

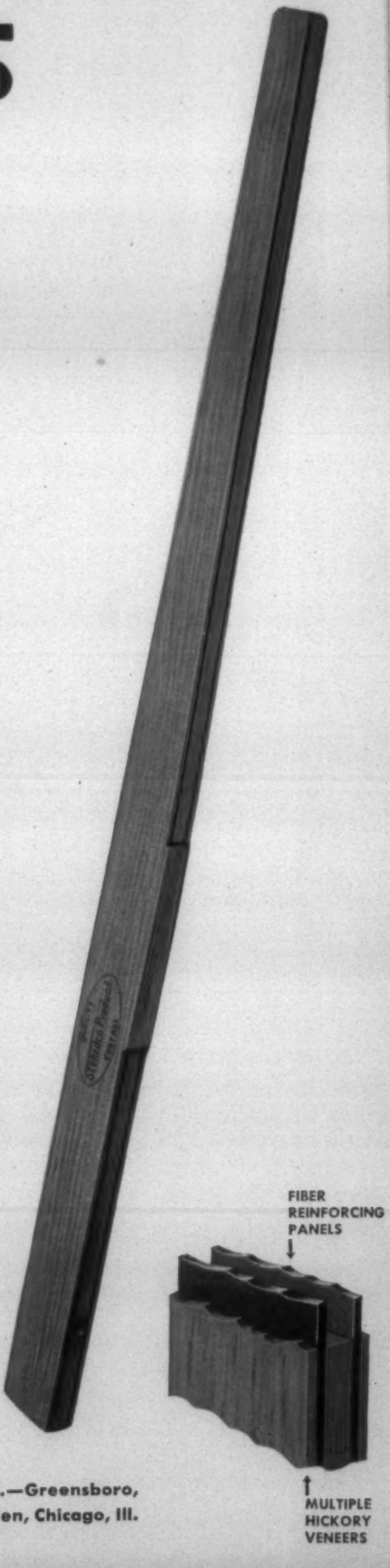
★ These laminated, reinforced picker sticks are much *less susceptible to warping* than ordinary picker sticks.

★ Stehedco DURAWELD Picker Sticks will pay for themselves many, many times with *superior performance* and *longer life*.

★ Designed for high-speed Draper looms, these picker sticks also give superior performance on slower single box and light multiple box looms.

★ The exposed, or nearly exposed, fiber at the picker end of the stick provides greater wear resistance to the lay end slot.

Invest in Reinforced DURAWELD Picker Sticks now and start counting your savings.



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Jacques Wolf Textile Printing Chemicals

MEASURE UP TO EVERY NEED

PRINTING

SUPERCLEAR* — All viscosities. Used for machine and screen printing of all types of textile fabrics. Produces bright prints with sharp outlines and very fine detail. Also used extensively to prevent migration of colors in dyeing.

SUPER GUM H—Full flow for roller and screen printing application. High color value, easy to handle. Compatible with all colors. Effective with acid or alkaline medium.

GUM TRAGACANTH SOLUTION—Made by a patented process. Used with Acid, Direct or Insoluble Azo Dyestuffs for screen printing, this gum gives exceptionally clear, sharp prints.

SCREEN GUM W-1141-B—Used as a thickener for Rapidogen and Indigosol type dyestuffs. Good color value; excellent mark and washes easily.

VAT GUM 80 XX—For application and discharge printing of vat colors. Has necessary balance of sulphoxylates, carbonates and hygroscopic agents plus converted thickeners to assure high color value.

DISCHARGING

HYDROSULPHITE AWC—Used for application of vat colors and for discharge printing on all textiles. It may also be employed for stripping woolens, acetates and other fabrics.

HYDROZIN—Used for discharge printing on acetate grounds. Also used for stripping colors on wool and hosiery (nylon, etc.). As a catalyst for polymerization of Vinylmonomers.

MORDANTS

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ALUMINUM ACETATE,
ALUMINUM FORMATE

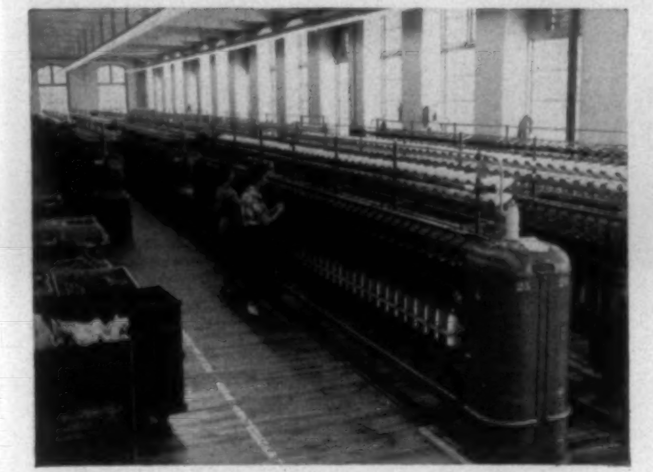
*Reg. U.S. Trademark

Jacques Wolf & Co. measures up to your printing needs again and again. For any step—in any spot—Jacques Wolf has a complete line of chemical auxiliaries, designed specifically for better performance. Here's a variety of up-to-date products and services that can positively be adapted to your operation—to improve your techniques, giving you brighter prints, sharper outlines. For information and samples, contact Jacques Wolf & Co. today.

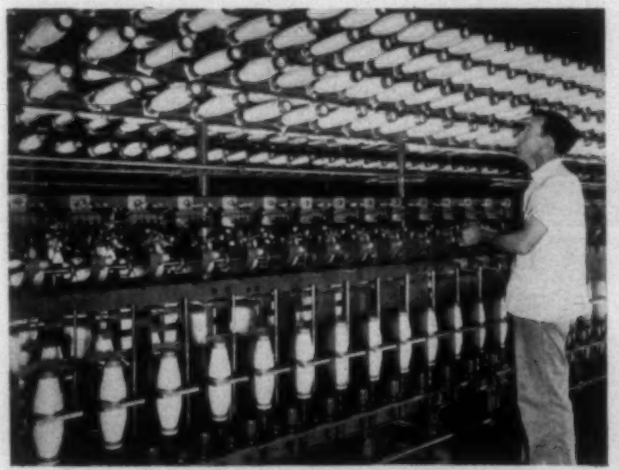
JACQUES WOLF & CO.
Chemicals PASSAIC, N.J.

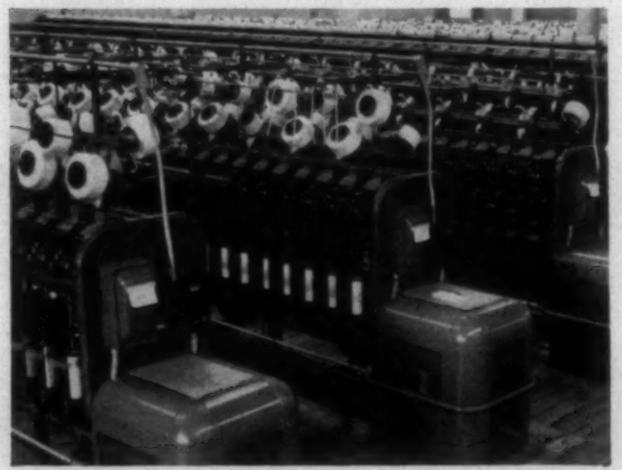
Plants in: Clifton, N.J., Carlstadt, N.J., Los Angeles, Calif.

Leesona® Model 10 puts a wonderful twist on any yarn


Twisting wool and worsted from spinning bobbins onto taper-top, take-up packages, as supply for winding machines.

Worsted, synthetic and metallic yarns from cones are plied together, twisted and taken up on large packages.


Twisting glass yarn from pirns to double-taper packages which will be used for filling and warping without re-winding.


Twisting Dacron* directly from zero-twist cheeses onto straight wind bobbins for further processing on high speed UNIRAIL® Uptwisters.

The world's best yarns — and all the others too — natural or synthetic — spun or filament can be plied and twisted best on a Leesona Model 10 Ring Twister.

With it you twist single end yarn or combine two to 16 ends, with a twist range of ½ to 55 turns. Automatic stop motion for each end in the ply permits tying knots in singles.

Here's the most versatile of twisting machines ready for any kind of package delivery — cones, cheeses, cakes, pirns, spools, bobbins or tubes. Produces straight wind, taper-top or double tapered take-up packages (filling or warp wind).

For more facts and figures write for Leesona Model 10 Ring Twister Bulletin 10-A.

*Dacron is a DuPont registered trademark.

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Many strange fibers are "meeting on the frames" today, as new developments continually increase the number and variety of synthetics and blends.

Controlling these new fibers and filaments in spinning or twisting can be tricky business. And you seldom have much time to experiment. Let Victor *experience* take the place of costly trial-and-error.

Victor "keeps a step ahead" by working with the producers during development of new synthetics. That's why, when they reach you for production, Victor is prepared to help you overcome any new processing problems they present.

When you need help to get top-quality and trouble-free production—with synthetics, blends, or natural fibers—call in a Victor Service Engineer. Write, wire, or phone the nearest Victor office for prompt service.

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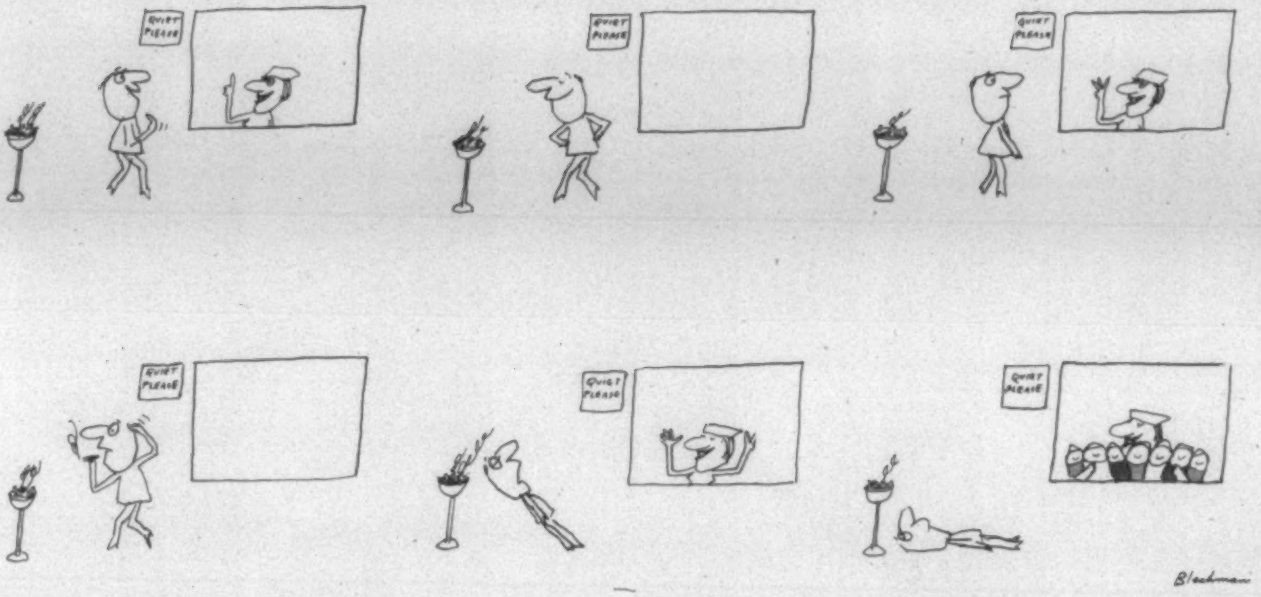
HAPPY ARRIVALS



7 new drapery colors in Courtaulds' Coloray*... all amazingly non-fading!

AQUA, ROSE, SAGE, CRYSTAL BLUE, MOCHA, ECRU *Non-fading after 500 Fadeometer hours, proving fastness six times better than the standard for drapery colors, L6 (which means no fading after only 80 hours). South Florida sun tests now being conducted.*

DAWN PINK *Non-fading after 160 South Florida sun hours, proving fastness equal to the standard, L7.*

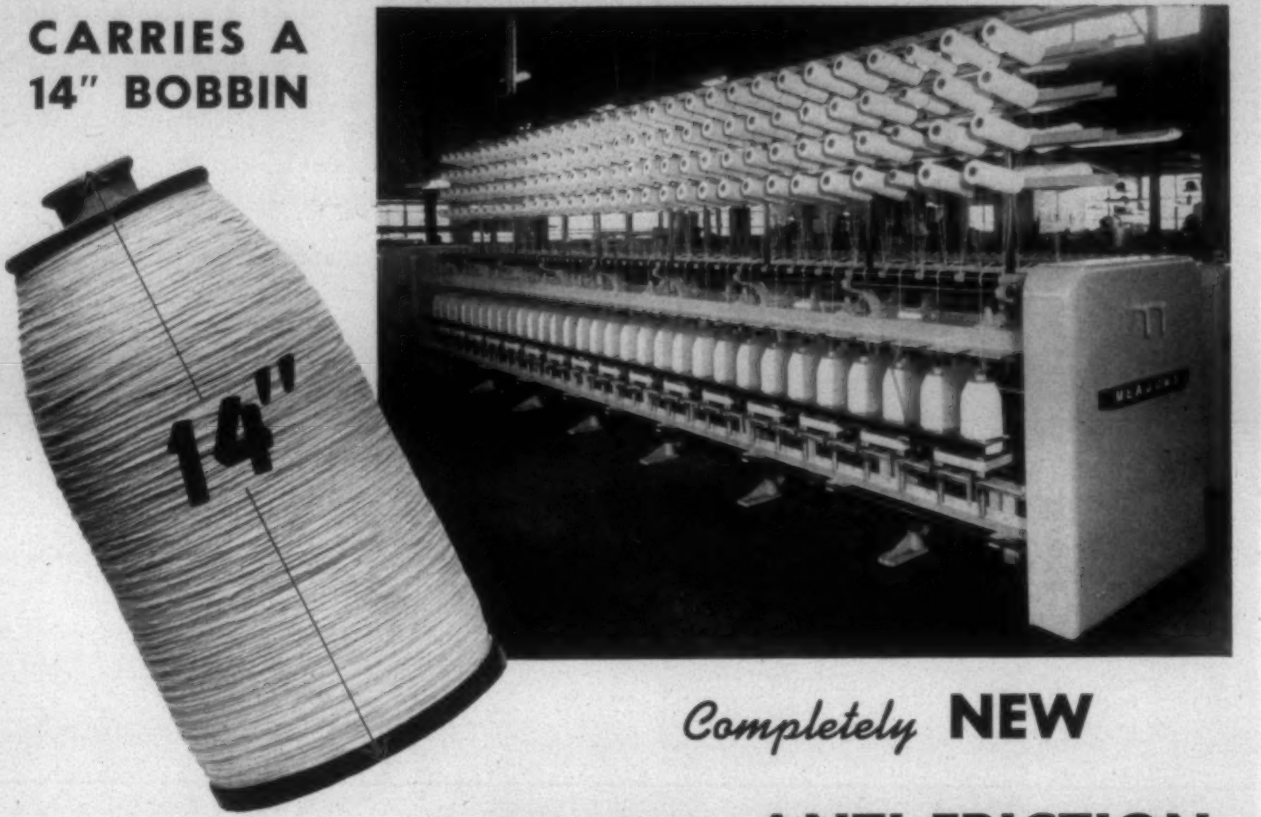
For the special delight of the drapery trade, Courtaulds has developed a series of light, almost luminous pastels with extraordinary colorfastness to sun and light . . . and everything. Happy colors indeed! They bring the total of Coloray basic shades to 25. They skyrocket the number of possible Coloray blends into the stratosphere. For Coloray rayon staple blends in infinite ways to produce infinite color effects. And Coloray, being a soft spun fiber, contributes a luxurious hand to fabrics for draperies, upholstery, every facet of home furnishings and fashion. It's wonderful to work with Coloray!

COURTAULDS'
COLORAY®
Solution-dyed Rayon Fiber With Captive Color..."Can't Escape!"

WHY SO COLORFAST? Because of Courtaulds' famous method of solution-dyeing. Color is poured into a viscose solution which flows into spinnerets and emerges as fully formed Coloray fiber. And inside, is that wonderful Coloray color. It's caged in. It can't get out.

For further information, write:
COURTAULDS (ALABAMA) INC., *first name in man-made fibers, first name in solution-dyeing*, 600 Fifth Ave., New York 20 • Greensboro, N. C. • Le Moyne Plant, Mobile, Ala.

CARRIES A
14" BOBBIN



Completely **NEW**

Completely **ANTI-FRICTION**

MEADOWS JUMBO TWISTER

This twister has a 10" gauge; 8" diameter ring; carries a bobbin 14" overall, 12" build. This means a 9 lb. package of knotless yarn on numbers as coarse as 8/8.

It is as completely anti-friction as a frame can be made. All gear-end studs and roll stands are ball-bearing. Individual drive pulleys and shafting are ball-bearing mounted. Double ball-bearing tension pulleys make reversing easy. Lifter rod bushings have been eliminated, replaced with anti-friction rollers. Even the builder motion is anti-friction.

It is a sturdy frame—of steel construction: base rails, roller beams, ring-rails, head and foot ends, doors . . . all are steel.

Our twister frames will run bobbins from 10 to 15 inches. They can be operated at higher speeds than any competitive twister. We can supply twisters from the smallest to the largest in gauge and ring.

If you have twisting problems, please contact us.

MEADOWS MANUFACTURING CO.

ATLANTA, GA.

For the Textile Industry's Use

— NEW MACHINERY, EQUIPMENT AND SUPPLIES —

Warp Sizing Agent

Ready acceptance of its new warp sizing agent, Acrysol P-6, by greige mills weaving filament Dacron fabrics has been reported by Rohm & Haas Co. The product, which recently became available in commercial quantities, is a result of extensive research and development by the company's textile chemists. Acrysol P-6 has been found by users to provide unusually high loom efficiency and cloth quality at low cost, on a variety of filament Dacron constructions. The experience of users has confirmed the company's conviction that this material is the most promising warp size since the first of the Acrysol sizing agents was introduced in 1950. Acrysol P-6 can be applied on conventional sizing equipment and there is no scumming during application. Shedding, flaking or pick-off on loom parts is negligible and hygroscopicity is low. The new sizing agent is easily removed from greige goods by conventional scouring methods. (Request Item No. K-1)

Shuttle Checking

Page Belting Co. has recently announced its new Page Check control after years of development and field trials. The check control is a new principle of inertia checking that requires less time to install and adjust than the present conventional straps. It is an assembly of hair-on leather and fabric straps sliding on a bar. Due to the design, the control strap is positioned in the same place each time and the checking of the shuttle is the same on each pick. Once contact with the picker stick is made in the checking motion, contact between the stick and the control strap is maintained until the power stroke begins.

The company claims this check control reduces adjustment time and Monday morning bang-offs to a minimum and gives better checking of the shuttle in addition to greater pick efficiency over any given period than any conventional check strap. Numerous initial installations made by factory trained personnel on XD, X2, XK, XP, XP2, XL, S5, S6 and other model looms have been extremely successful. Some of the straps have been in operation for more than 18 months. (Request Item No. K-2)

Transmission System

A new electronic transmission system based on the use of a differential transformer transmitter and an electronic Dynamaster receiver has been introduced by The Bristol Co. This system is designed to make measurements of such variables as pressure, differential pressure, liquid level, temperature and mechanical motion, and convert them to a.c. voltage signals proportional to the measurements. The a.c. signals are transmitted continuously and instantaneously to remote self-balancing electronic Dynamaster receivers. The receivers can be mounted up to 1,000′ from the transmission center.

Bristol's new miniature Dynamaster self-balancing receivers in interchangeable indicating or 3″ strip-chart recording types can be used with the transmitters, as well as the standard 12″ strip-chart or round-chart Dynamaster recorders. The miniature receivers are said to be ideal for use in centralized instrument panels or graphic panels, as they match the company's line of Metagraphic pneumatic control receivers in appearance. The receivers occupy a panel space only 5″ square. (Request Item No. K-3)

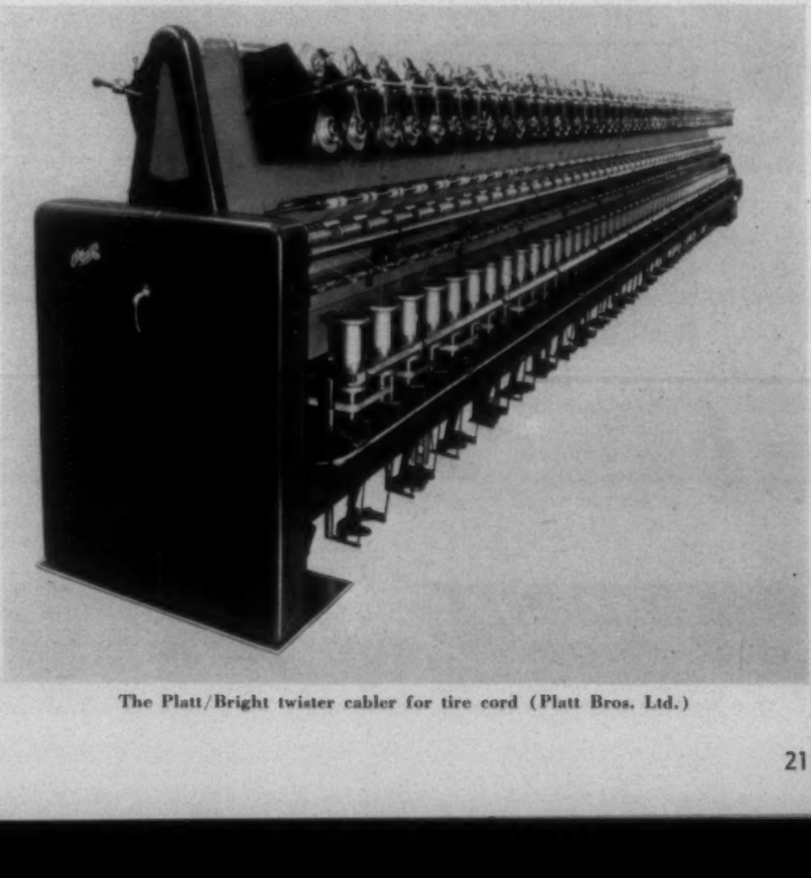
Metlon-With-Mylar

The Metlon Corp. reports that the exceptionally wide use of Metlon-with-Mylar in all grades of fabrics during the past year has brought with it numerous requests for new metallic effects. In answer to these demands, a line of colors that will blend with all basic shades of fabrics has been developed. They include emerald green, dragon red, bronze, royal blue, blush pink, cornflower blue and copper. These are in addition to the gold and silver which have been so widely accepted. The greatly expanded use of color, particularly in wearing apparel, has opened up new design possibilities for metallic yarns, with the proviso that they be machine washable and dyeable, two of the important characteristics of Metlon's Mylar quality. (Request Item No. K-4)

Twister Cabler

Platt Bros. (Sales) Ltd. has announced that in collaboration with John Bright & Bros. Ltd., they have developed a new twister cabler for tire cord. The aim of the development has been to find the most effective method of producing tire cord from continuous filament on one machine in a single operation, so as to provide a top quality cord with the minimum labor requirements at a high machine efficiency and with low waste losses. To be generally acceptable to the trade, the machine has also to take account of modern production requirements, give low processing costs, meet the ever-increasing demands for higher output and economize on floor space. The new machine is dimensionally the same as conventional doublers.

The new Platt/Bright twister cabler is said to meet all these requirements and is ideally suited for the production of viscose and nylon tire cords. Top quality cord can be attained on the twister cabler with a minimum number of processes. The studied



The Platt/Bright twister cabler for tire cord (Platt Bros. Ltd.)

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simplicity of the frame, both mechanically and operationally, insures that there is little that can go wrong, while its neat and smooth lines reduce cleaning time to a minimum. It is a double sided machine built in two decks and embodies the uptwisting and ring twisting principles. The uptwister ply-twisting spindles carrying the double-flanged supply packages are located on the top deck. From here, the ends are drawn through flyer eyes, lappets, guides and delivery rollers to the ring and traveller cabling spindles on the bottom deck and wound onto double-flanged delivery bobbins. The standard machine is 9" gauge with 6" diameter rings and will produce packages containing 4-5 lbs. of finished cord. Maintaining the same gauge, 9 lb. delivery packages reportedly can be accommodated by increasing the ring diameter to 7" and lengthening the lift. (Request Item No. K-5)

Flaked Stearyl Alcohol

Hodag Chemical Corp. has announced that a flaked, technical grade stearyl alcohol is now being offered bagged in the exact quantity requested by the user. This service eliminates scooping, weighing, drum handling, storage problems, guesswork and waste. The user merely adds the required amount of stearyl alcohol flakes, pre-packaged by Hodag, and discards the paper bag. The product is used as an intermediate for textile finishing agents.

(Request Item No. K-6)

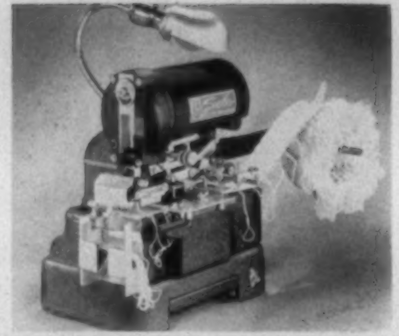
Anti-Perspiration Finish

The Carolina Aniline & Extract Co. has announced the development of a permanent finish for cotton textiles that will control perspiration and other odors caused by bacterial growth through a great many repeated washings or drycleanings. By controlling the growth of bacteria the company says the incubation and odor developed therefrom is controlled. Odor is eliminated in this manner.

The new finish is said to be rather inexpensive in application and can be combined with melamine resins by substituting a proportion in place of the resins. The product requires no special processing and there is no skin allergy phase to be combated. The product is said to be ineffective on dry cloth due to its electrobiological properties. It is effective only in the presence of moisture. (Request Item No. K-7)

Label Marking Machine

A new model multi-purpose ticket and label marking machine has been introduced by Soabar Co. The new machine, known as Model 22ST, incorporates all the features of the company's Model 22, but includes the capacity for imprinting string tickets. According to the company, the Model 22ST was a natural outgrowth of the older model and is intended to run Soabar's larger sizes of string tickets, as well as a wider range of other tickets and labels.



Multi-purpose ticket and label marking machine (Soabar Co.)

The new machine automatically marks, cuts, stacks or rewinds more than 100 sizes and styles of tickets at a rate of 144 a minute. It marks full information on size tickets, sew-in labels, re-order stub tickets, bundle and work tickets, box-end labels and a wide assortment of packaging labels. It has a self-stop counter and ticket stacker and includes such optional features as turn wheels for quick changing of numerical information. A special sequence selector control is available for use in connection with numbering registers so that various repeat sequences can be obtained for marking control numbers or matching numbers on tickets. (Request Item No. K-8)

Conveyor Pulleys

Keeping in step with belt manufacturers' improvements in fabric-carcass conveyor belts, The American Pulley Co. has announced improvements to a major portion of its line of Type H D conveyor pulleys. Certain design changes have been made in some sizes so that now the entire line of Type H D conveyor pulleys has built-for-the-belt ratings without help from over-size shafts, the company says. Other details of the new design include improvements in the firm's Wedg-Tite hubs and the addition of two new hub sizes.

(Request Item No. K-9)

New Rayon Yarn

American Bemberg has announced the perfection of a new rayon yarn, presently known as Type 51, with color applied at irregular intervals along its length. American Bemberg expects this yarn to take its place with its family of hit novelty yarn numbers including Cupioni, Flaikona, Nub-lite and Strata.

Although this yarn is dyed in the spinning process before it is dried, American Bemberg emphasizes that it is not one of its Cupracolor solution dyed yarns where the color pigment is incorporated in the spinning solution. In the case of Type 51 the color is applied and cured after the yarn is formed by an exclusive process developed by American Bemberg. As a result of this special process, the color fastness of this yarn equals that of the Cupracolor solution dyed yarns, with a rating of over 100 hours in the Fadeometer, and with perfect washability at 160° F.

The colors are applied intermittently, and

Gossett's NEW BIG drawing coiler gives

TWICE the continuous running time . . . HALF the creeling time!

Photo shows a recent installation in a prominent mill of Gossett's NEW BIG drawing coilers . . . size 15" x 42"

From Gossett Machine Works, pioneers in the big coiler conversion technique, comes Gossett's NEW BIG Drawing Coiler!

Here's THE big coiler which is especially constructed for greater all-round efficiency at high speeds!

Smooth, low-noise operation and longer wear are features built-in by Gossett's master technicians.

Get twice the continuous running time . . . cut your creeling time in half . . . install Gossett's NEW BIG drawing coilers on your present drawing frames NOW!

We convert 10" and 12" drawing coilers to 14" through 15" in diameter and 36" to 42" in height.

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GOSSETT Machine Works, Inc.
GASTONIA, NORTH CAROLINA

the color intensity increases toward the center of each dyed portion. It may be used alone, in combination with other yarns, and in conjunction with overdyeing. At present there are six stock colors: black, red, blue, brown, yellow and green, with 16 additional colors now in process of development. Moreover, Bemberg is equipped to match any special color to order and with relatively smaller minimum poundage than in the case of solution-dyed Cupracolor yarns. (Request Item No. K-10)

Packaging Tape

A general purpose industrial tape resistant to moisture and many acids, alkalis and solvents has been announced by Minnesota Mining and Mfg. Co. Called Scotch brand Paklon film tape No. 681, it is a transparent pressure sensitive tape which has long aging properties due to the dimensional stability of the film backing. The Paklon film backing is inert to oils, alcohols, aliphatic hydrocarbons and most alkalis and concentrated and dilute acids, the company reports.

With an adhesion of 40 ounces per inch of width (A.S.T.M.), the new tape has the excellent holding and sealing properties needed for light to medium industrial packaging uses. The tape has high water vapor and aroma impermeability and it is noninflammable. The firm adhesive also has good instant adhesion, or the ability to adhere tightly on only light contact. A special treatment allows the tape to remove easily from the roll. Caliper of the new tape, which is printable, is 2.6 mils and it has a tensile strength of 25 to 35 lbs. per inch of width. (Request Item No. K-11)

Anti-Vibration Pad

U. S. Patent No. 2,809,145 issued to F. Roland McDermott provides exclusive manufacturing rights for a vinyl, sisal and cork laminated machinery mount which has been named Air-Loc. The patent covers basic manufacturing methods for the pad, with each lamination being a separate vinyl-impregnated, needled fabric. The pad, or mount, in actual use under production machinery is claimed to have a superior spring-back, which prevents the material from taking a deep and permanent set. This feature helps to retain the vibration damping characteristics of the mount.

(Request Item No. K-12)

Strip-Chart Telemeter

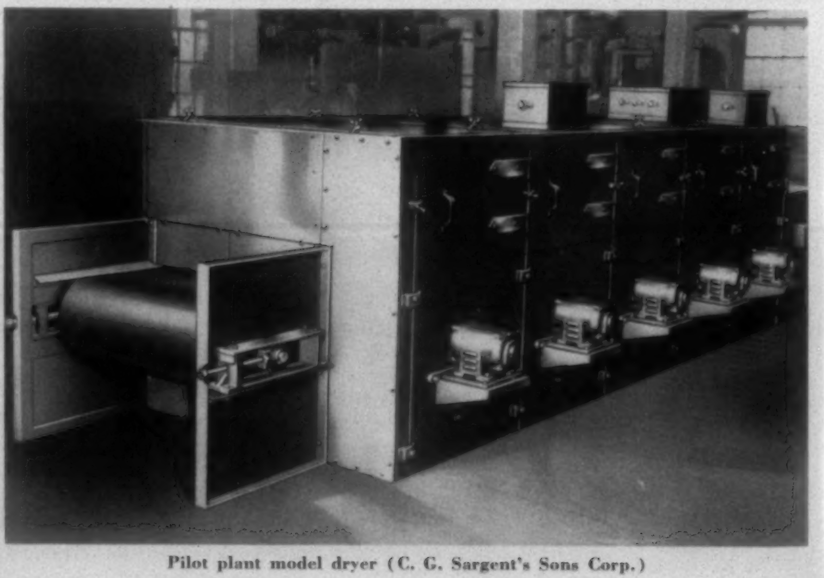
A multiple-printing strip-chart Metameter telemeter receiver has been announced by The Bristol Co. The new telemeter receiver will print out up to 16 separate records from as many telemetering transmission centers. Using a multiple-switching arrangement, the new receiver can monitor successfully a large number of values from any distance necessary. The variables need not be all of one kind, but could be a combination of pressure, flow, temperature, liquid level, etc. The instrument prints on a 12¼" wide-strip chart, and is available with either a 5-sec. or 15-sec. time-impulse telemetering system.

(Request Item No. K-13)

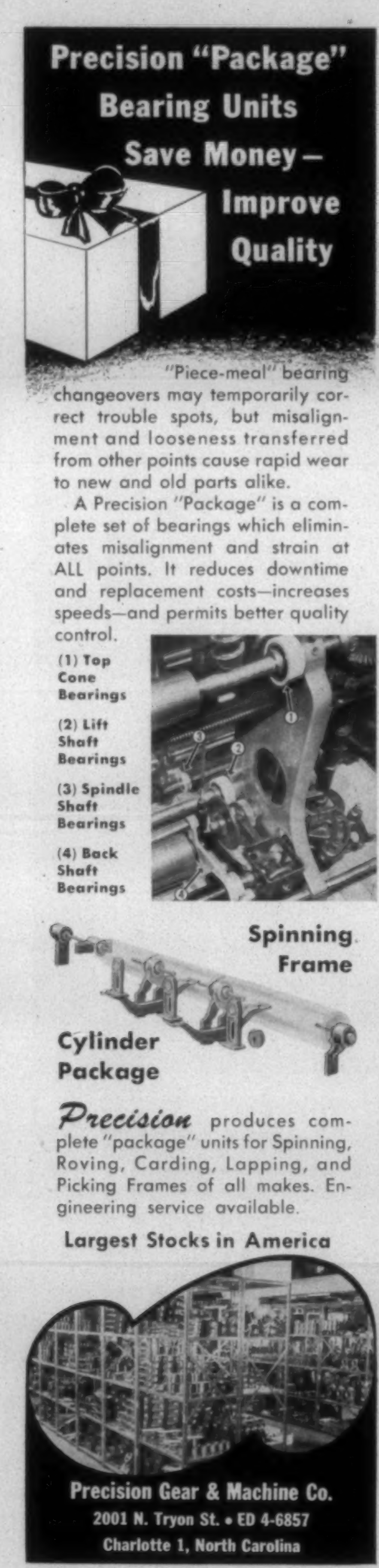
Pilot Plant Dryer

C. G. Sargent's Sons Corp. has announced a new pilot plant model dryer, designed to fill the gap between the laboratory and production line. The manufacturer reports that the new dryer has been thoroughly field tested and job-proven in a number of mills working on both natural and synthetic fibers during the past year, with highly gratifying results.

Small enough to be used in the laboratory, the dryer also has sufficient capacity for limited production work. It can be made with any number of drying sections and is so designed that additional sections, completely fabricated at the Sargent plant with fan, motor, heating coils and conveyor, may be installed in the mill easily and in record-



Pilot plant model dryer (C. G. Sargent's Sons Corp.)



Precision "Package" Bearing Units Save Money—Improve Quality

"Piece-meal" bearing changeovers may temporarily correct trouble spots, but misalignment and looseness transferred from other points cause rapid wear to new and old parts alike.

A Precision "Package" is a complete set of bearings which eliminates misalignment and strain at ALL points. It reduces downtime and replacement costs—increases speeds—and permits better quality control.

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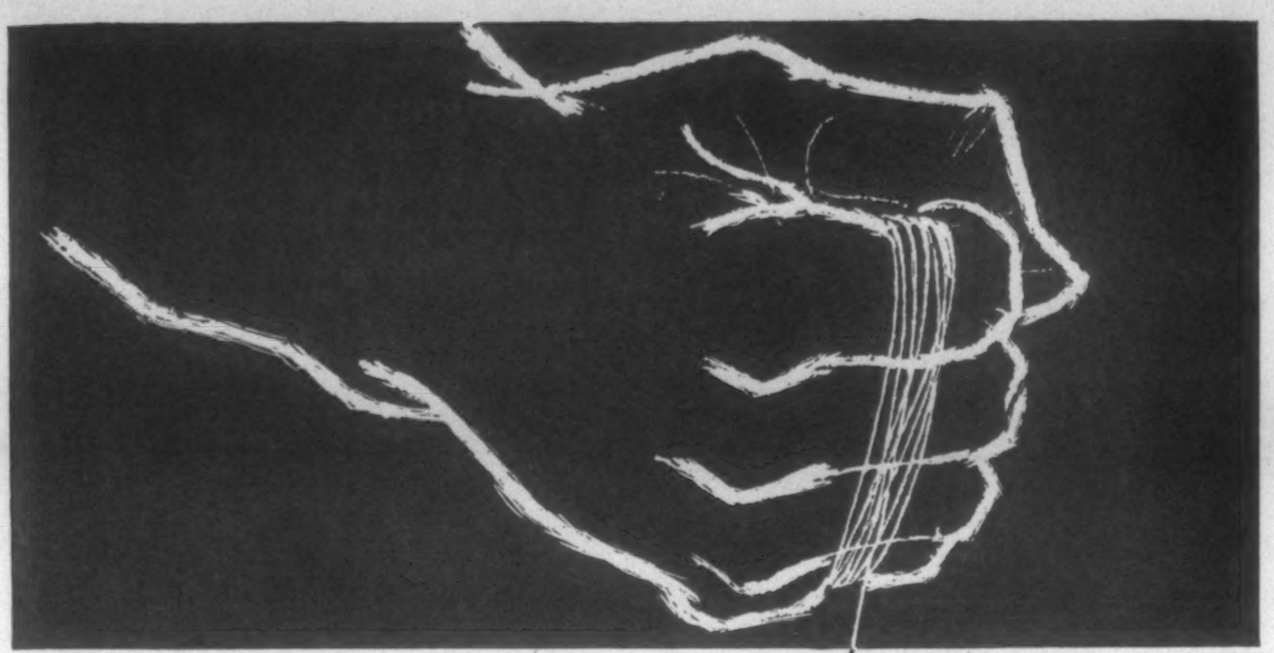

Now...Greater Strength in Lighter Yarns

No flexible reinforcing material equals this new Super Rayflex in *strength per dollar* . . . and it is now available in 600 and 900 denier as well as heavier sizes.

- It offers 4.5 grams per denier conditioned strength—a 40% increase over regular yarns.
- Its industrial uses include all reinforcing applications with laminates involving paper, mechanical rubber goods, plastics, polyethylene, scrim.
- To get equivalent strength plus comparable flex life in other fibers, you would have to pay 22% to 100% more.

If you are looking for greater strength per dollar and excellent flex life, Super Rayflex is the reinforcing material you need.

We invite your inquiry

Means Lower Reinforcing Cost with Avisco Rayon Yarns

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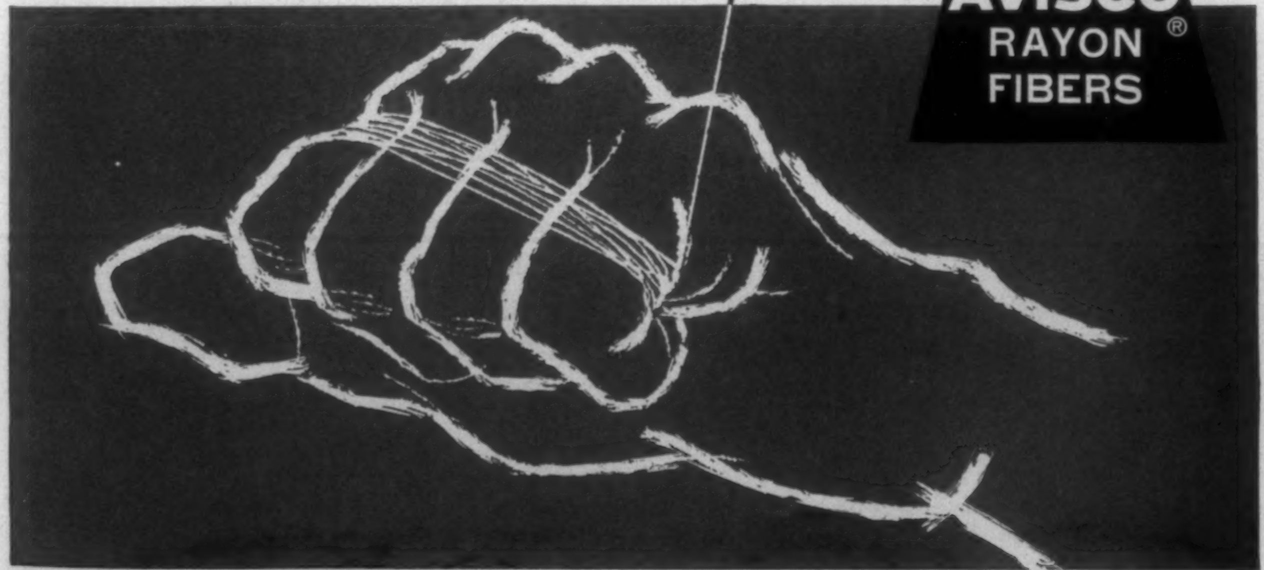

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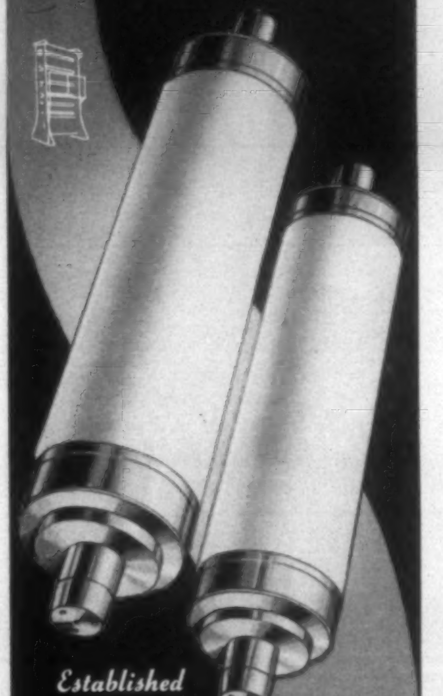

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We are equipped to give service on new and refilled rolls with various types of fillings and densities. Also stainless steel, steel, brass and special purpose rolls.

Our engineers will gladly call to give you the benefit of their long experience making rolls for processing textiles and paper.

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WATER FILTRATION EQUIPMENT
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quick time. Sections may be temperature and moisture zoned separately and independently. The dryer is built of aluminum, stainless steel or other materials as required. It is said to be extremely flexible and versatile. Commonly built in two sizes, the smaller dryer is only 4'-0" high and 3'-9" wide. (Request Item No. K-14)

Bond Coatings

The chemical division of The Borden Co., New York City, has announced the development of 3 Arcco-brand bond coatings specifically designed for obtaining high-strength, flexible bonds of plastisol and organosol film to nylon and many other synthetic fabrics. Both a 1-coat and a 2-coat system have been devised by the company for use of its 3 Arcco coatings materials. The company says that both systems have been evaluated thoroughly in the laboratory and proved in limited commercial applications.

The company reports that the 1-coat system is completely practical. For more critical applications the 2-coat system is recommended because it gives better color, consistently higher bond values over a wider range of weave constructions and can be used in less time. Adhesion values for plastisol films exceed 20 lbs. peel strength per 2-inch width. (Request Item No. K-15)

Teflon Adhesives

Three new adhesives for bonding treated Teflon to other materials or to itself have been developed by the adhesives department of Raybestos-Manhattan Inc. The adhesives —designated as Ray-Bond R-86004, R-86024 and R-81001—permit the effective bonding of treated Teflon to wood, steel, glass, aluminum, copper, ceramics, plastics or any other material that will bond with an adhesive. As a group, the new Ray-Bond adhesives reportedly meet the requirements for strength, chemical resistance, flexibility and temperature resistance for practically all Teflon bonding applications.

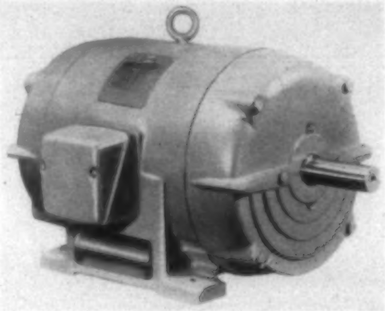
Of the three new adhesives, R-86004 is recommended where maximum chemical resistance is required. In 30-day immersion tests, Teflon bonded with this adhesive has shown excellent resistance to ethyl acetate 50% ethyl alcohol, tap water, 3 and 30% sulphuric acid, 1 and 10% sodium hydroxide, 2% sodium carbonate, 10% ammonia, 1% phosphoric acid, 10% hydrochloric acid and 10% nitric acid.

R-86004 is a thermosetting, two-component (base and activator) adhesive which can be cured at room temperature. Test pieces of etched Teflon bonded to steel show a peel strength of 24 lbs. per linear inch at room temperature and 7 lbs. at 300° F. (the maximum temperature at which the adhesive can be used).

R-86024, also a thermosetting, two-component adhesive, can also be cured at room temperature. Costing less than R-86004, it is recommended for economical bonding of Teflon for dry applications. Peel strength of Teflon bonded to steel with R-86024 is 17 lbs. per linear inch at room temperature and 1¾ lbs. at 300° F.

R-81001 is a thermosetting adhesive recommended for bonds that must endure heat or must be flexible. This adhesive will resist temperatures to the limit for Teflon and can be used to bond assemblies subject to temperatures up to 400° F. for prolonged periods. Complete cures are obtained at 325° F. for 15 minutes, 370° F. for 10 minutes or 400° F. for 5 minutes. Peel strength of Teflon bonded to steel with R-81001 is 16 lbs. per linear inch at room temperature and 3 lbs. at 300° F. This bond will resist attack by oil and solvents. (Request Item No. K-16)

Synchronous Motor



An open drip-proof type Syncro-Spede motor (The Louis Allis Co.)

The Louis Allis Co. has recently announced production of industry's first synchronous induction motor built in the same N.E.M.A. frame size as a standard motor of equal horsepower. Called the Syncro-Spede, this motor accelerates as an induction motor but runs at exact synchronous speed without permanent magnets or d.c. excitation involving collector rings and brushes, wound rotating fields, etc. It is the most compact a.c. motor available for synchronous applications and offers the highest power factor and efficiency. It is suitable for use on many applications requiring constant speed with varying load. Because of its size it can provide precise frequency systems in small generator ratings.

As a conveyor drive, the motor makes it possible to have an exact constant-speed or adjustable-speed system from no-load to full-load conditions with a minimum of driving units and controls. Since this motor is unaffected by voltage fluctuations, it is also ideal for precision timing and metering devices and for recording instruments. The Syncro-Spede is manufactured in ratings from 1 to 100 h.p. in any enclosure type and can be foot or flange-mounted. It is designed for horizontal or vertical mounting with a wide range of mechanical modifications available to meet specific application requirements. (Request Item No. K-17)

Fluorescent Brightener

With the addition of Uvitex A to its Uvitex series of fluorescent brighteners, Ciba Co. Inc. introduces a new kind of product that is designed to provide a unique

Converts Size Finer, Faster in a Gaulin Homogenizer

Converting size by mechanical means rather than thermal is the modern way to make a better, more uniform size at lower cost. Hundreds of progressive mills have proved it to their complete satisfaction.

A Gaulin Homogenizer converts size particles under tremendous speed and pressure. Makes them more uniform and stable.

And that's where the savings begin. First, you get closer viscosity control. You use less starch, steam and supervision. Less hard size. And can store your size as long as 48 hours.

But just as important, Gaulin-Homogenized Size penetrates yarn better, more uniformly — makes a marked improvement in the quality of your warp yarn.

Experience proves that most Gaulins pay for themselves in from 6 to 18 months. We'll be glad to install a Gaulin Homogenizer for you on a guaranteed performance basis. Whether you're making cottons, worsteds or synthetics, write for more information.

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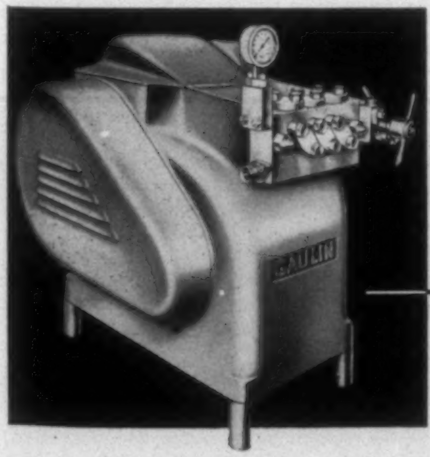

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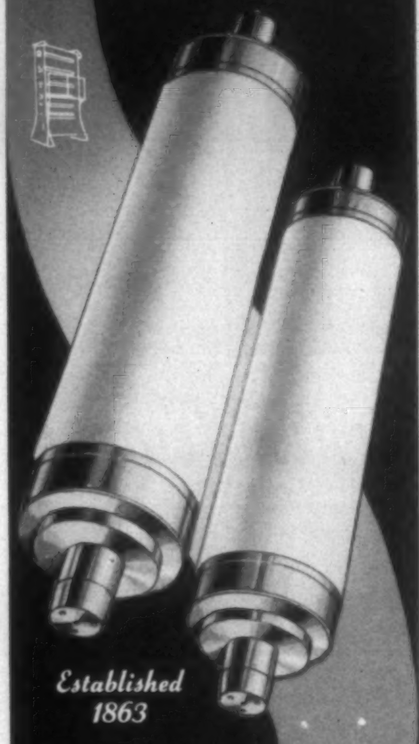

"HOLYOKE"
CALENDER
ROLLS

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For nearly a century "HOLYOKE" Rolls have been world renowned for sturdy, rugged construction, designed to give dependable, long life.

We are equipped to give service on new and refilled rolls with various types of fillings and densities. Also stainless steel, steel, brass and special purpose rolls.

Our engineers will gladly call to give you the benefit of their long experience making rolls for processing textiles and paper.

Correspondence Invited

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COMPANY
CALENDER and EMBOSSING ROLLS
for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT
HOLYOKE, MASSACHUSETTS

quick time. Sections may be temperature and moisture zoned separately and independently. The dryer is built of aluminum, stainless steel or other materials as required. It is said to be extremely flexible and versatile. Commonly built in two sizes, the smaller dryer is only 4'-0" high and 3'-9" wide. (Request Item No. K-14)

Bond Coatings

The chemical division of The Borden Co., New York City, has announced the development of 3 Arcco-brand bond coatings specifically designed for obtaining high-strength, flexible bonds of plastisol and organosol film to nylon and many other synthetic fabrics. Both a 1-coat and a 2-coat system have been devised by the company for use of its 3 Arcco coatings materials. The company says that both systems have been evaluated thoroughly in the laboratory and proved in limited commercial applications.

The company reports that the 1-coat system is completely practical. For more critical applications the 2-coat system is recommended because it gives better color, consistently higher bond values over a wider range of weave constructions and can be used in less time. Adhesion values for plastisol films exceed 20 lbs. peel strength per 2-inch width. (Request Item No. K-15)

Teflon Adhesives

Three new adhesives for bonding treated Teflon to other materials or to itself have been developed by the adhesives department of Raybestos-Manhattan Inc. The adhesives —designated as Ray-Bond R-86004, R-86024 and R-81001—permit the effective bonding of treated Teflon to wood, steel, glass, aluminum, copper, ceramics, plastics or any other material that will bond with an adhesive. As a group, the new Ray-Bond adhesives reportedly meet the requirements for strength, chemical resistance, flexibility and temperature resistance for practically all Teflon bonding applications.

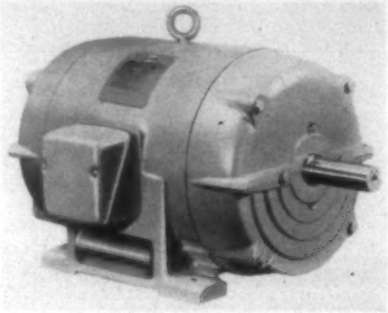
Of the three new adhesives, R-86004 is recommended where maximum chemical resistance is required. In 30-day immersion tests, Teflon bonded with this adhesive has shown excellent resistance to ethyl acetate 50% ethyl alcohol, tap water, 3 and 30% sulphuric acid, 1 and 10% sodium hydroxide, 2% sodium carbonate, 10% ammonia, 1% phosphoric acid, 10% hydrochloric acid and 10% nitric acid.

R-86004 is a thermosetting, two-component (base and activator) adhesive which can be cured at room temperature. Test pieces of etched Teflon bonded to steel show a peel strength of 24 lbs. per linear inch at room temperature and 7 lbs. at 300° F. (the maximum temperature at which the adhesive can be used).

R-86024, also a thermosetting, two-component adhesive, can also be cured at room temperature. Costing less than R-86004, it is recommended for economical bonding of Teflon for dry applications. Peel strength of Teflon bonded to steel with R-86024 is 17 lbs. per linear inch at room temperature and 1¾ lbs. at 300° F.

R-81001 is a thermosetting adhesive recommended for bonds that must endure heat or must be flexible. This adhesive will resist temperatures to the limit for Teflon and can be used to bond assemblies subject to temperatures up to 400° F. for prolonged periods. Complete cures are obtained at 325° F. for 15 minutes, 370° F. for 10 minutes or 400° F. for 5 minutes. Peel strength of Teflon bonded to steel with R-81001 is 16 lbs. per linear inch at room temperature and 3 lbs. at 300° F. This bond will resist attack by oil and solvents. (Request Item No. K-16)

Synchronous Motor



An open drip-proof type Syncro-Spede motor (The Louis Allis Co.)

The Louis Allis Co. has recently announced production of industry's first synchronous induction motor built in the same N.E.M.A. frame size as a standard motor of equal horsepower. Called the Syncro-Spede, this motor accelerates as an induction motor but runs at exact synchronous speed without permanent magnets or d.c. excitation involving collector rings and brushes, wound rotating fields, etc. It is the most compact a.c. motor available for synchronous applications and offers the highest power factor and efficiency. It is suitable for use on many applications requiring constant speed with varying load. Because of its size it can provide precise frequency systems in small generator ratings.

As a conveyor drive, the motor makes it possible to have an exact constant-speed or adjustable-speed system from no-load to full-load conditions with a minimum of driving units and controls. Since this motor is unaffected by voltage fluctuations, it is also ideal for precision timing and metering devices and for recording instruments. The Syncro-Spede is manufactured in ratings from 1 to 100 h.p. in any enclosure type and can be foot or flange-mounted. It is designed for horizontal or vertical mounting with a wide range of mechanical modifications available to meet specific application requirements.

(Request Item No. K-17)

Fluorescent Brightener

With the addition of Uvitex A to its Uvitex series of fluorescent brighteners, Ciba Co. Inc. introduces a new kind of product that is designed to provide a unique

Converts Size Finer, Faster in a Gaulin Homogenizer

Converting size by mechanical means rather than thermal is the modern way to make a better, more uniform size at lower cost. Hundreds of progressive mills have proved it to their complete satisfaction.

A Gaulin Homogenizer converts size particles under tremendous speed and pressure. Makes them more uniform and stable.

And that's where the savings begin. First, you get closer viscosity control. You use less starch, steam and supervision. Less hard size. And can store your size as long as 48 hours.

But just as important, Gaulin-Homogenized Size penetrates yarn better, more uniformly — makes a marked improvement in the quality of your warp yarn.

Experience proves that most Gaulins pay for themselves in from 6 to 18 months. We'll be glad to install a Gaulin Homogenizer for you on a guaranteed performance basis. Whether you're making cottons, worsteds or synthetics, write for more information.

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ALICE MFG. CO.
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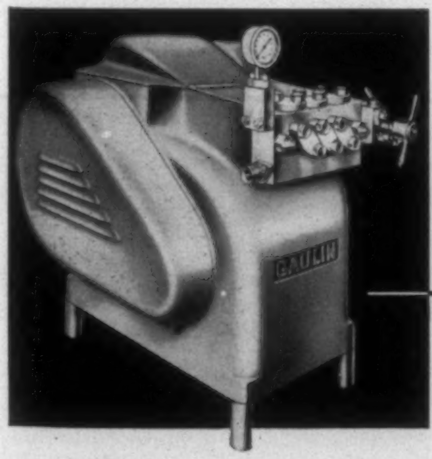
TALLASSEE MILLS
INMAN MILLS
CLIFTON MFG. CO.
MARION MFG. CO.
RIEGEL TEXTILE CORP.



Gaulin Gaulin TRADE MARK

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IRREGULAR PAGINATION

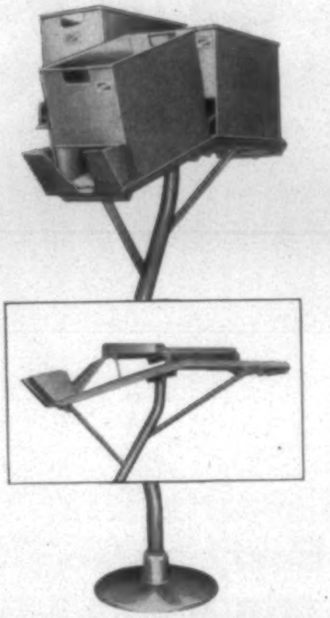
BENNETT ROSE COMPANY

MATERIALS HANDLING EQUIPMENT WILL CUT YOUR WEAVE ROOM COSTS

FILLING BOX RACKS

(patent applied for)

Sturdily built and efficient—holds two full boxes of filling. Each box holds approximately a half a frame of filling, 130 bobbins, with each bobbin laying crossways with the butts all on the same side. The RACKS are placed beside the looms so that the dispensing spout will be just over the battery filling. The dispensing spout is lined with stainless steel as is the filling box. A battery filler can fill up to twice as many batteries than from a tub or basket. There is a side ledge to hold an empty box after the front box is emptied so that the rear full box can be pulled down into position for the dispensing spout.



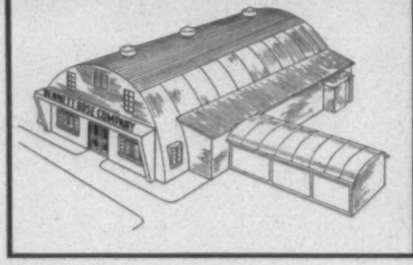
FILLING BOXES: Used for doffing the filling in the Spinning Room from where they are transported to the Weave Room and mounted on Racks (see above) installed at the looms. Boxes may be made of galvanized metal with a stainless steel bottom, or of all stainless steel with perforations for the steaming process also. They can be furnished in various sizes.

(Available with or without dispensing feed-lip.)

FILLING BOX TRANSPORT

This Filling Box Transport is of all steel construction — is used to handle the Filling Boxes from the Spinning Room to the Weave Room — with four shelves holding 20 boxes. May be equipped with any casters. (By using this BENNETT ROSE Battery Filling System a mill can save from 30 to 50% on its battery filling costs and pay for this equipment in from 12 to 20 months.)

Send for further information.
Write for our latest catalogue.



BENNETT
ROSE
COMPANY
P. O. BOX 8
ROEBUCK, S. C.

whiteness on acrylic fibers. Developed especially for the whitening of Orlon, the new Uvitex A not only yields an intense neutral white on this fiber but in this effect shows a light fastness rating of 5 or better, which is distinctly above the rating usually exhibited by brighteners.

Besides giving excellent results on acrylic fibers, Uvitex A is also said to be effective for brightening nylon and cotton, and thus proves useful in treating blends. Amounts in the range of 0.1 to 1.0% brightener provide very good results in most cases. The versatility of the product makes it applicable in conjunction with sodium chloride bleaching. Uvitex A is supplied as a fine aqueous dispersion that mixes readily with water, and it is applied only by exhaustion methods, using acid conditions and treatment at the boil.

Uvitex A, a product of Ciba research, fills an important spot in the brightener field. Adding its unequalled properties to the Uvitex group of brighteners for all types of natural and synthetic fibers, Uvitex A gives to acrylic fibers, which are normally bleach resistant, a strong whiteness heretofore unobtainable. In addition, a high degree of resistance to light fading is provided. (Request Item No. K-18)

Reliance Motors

A complete line of totally-protected, Series D a.c. motors in the new, large N.E.M.A. frame 364U through 445U has been introduced by Reliance Electric and Engineering Co., Cleveland, Ohio. Foot-mounted and footless horizontal models in the 360 frame diameter are presently stocked in all standard enclosures—protected; totally-enclosed, fan-cooled; corrosion-proof; and explosion-proof—for operation on 208 through 550-v. in-plant alternating current. Other new NE.M.A. frame sizes through 125 h.p., with their modifications, are being made available on a monthly schedule.

In N.E.M.A. electrical design B, C and D, the new line of large-frame motors may be specified in many speeds with Class A, Class B or high-temperature Class H insulation. Part-winding starting, to eliminate loading of power supply lines and resultant momentary light dimming, is available for commercial air-conditioning and other applications with similar requirements.

(Request Item No. K-19)

Drive Unit

A new textile drive, introduced by Layton-Greenfield Inc., can be adapted to meet each mill's specific drive requirements, yet these units are made up entirely of standard off-the-shelf components. The units are assembled on cast iron or fabricated steel base equipped with leveling screws for ease of installation on any existing or specially prepared foundation pad.

Standard totally enclosed pressure lubricated gear reducers and either air or mechanical clutches in suitable standard sizes are selected and combined with pulleys and belt transfer devices to make this a completely custom engineered unit. It is further claimed that greater dependability, operating safety and lower horsepower requirements are provided by these units as well as cost savings and ready availability of replacement parts. These units are currently offered in sizes up to 40 h. p. Larger units can be provided on special order.

(Request Item No. K-20)

Plug-In Busway

A new 100-amp. plug-in busway, designed for use where plug-in outlets over a wide area are necessary, has been announced by the General Electric Co. The new busway, known as Type DH, can be hung on 10-ft. centers in the edgewise position. Type DH is used as a plug-in system and as a feeder for lighting systems and as a feeder or branch circuit from a switchboard or other power-consuming device. When a 100-amp. or less receptable is required to feed a portable welder or similar machine, Type DH can be installed vertically between the flanges of a steel column or against a wall.

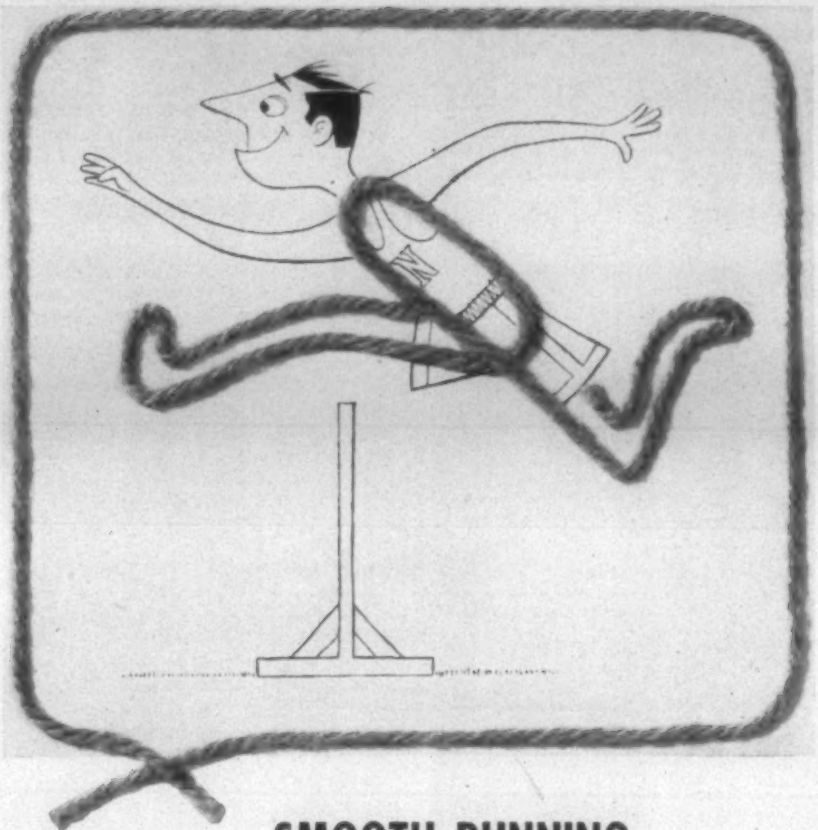
The overlap pressure joint of the busway is joined mechanically and electrically by tightening 6 captive screws. This simple joint construction is said to greatly reduce installation time. The new busway is rated 100 amps., 600 v. maximum, 3 and 4-wire construction. General Electric engineers report that it will withstand a short-circuit current of 15,000 amps. R.M.S. asymmetrical (12,000 amps. R.M.S. symmetrical) when properly protected by a main circuit breaker or a short-circuit current of 100,000 amps. asymmetrical (80,000 amps. R.M.S. symmetrical) when protected with a 100 or 150-amp. General Electric Type CLF current-limiting fuse. A wide variety of fittings and accessories is available to tailor the busway to virtually any job requirement.

(Request Item No. K-21)

Hart Softeners

Hart Products Corp. has announced the development of two new softeners for the finishing of cotton and synthetic fabrics. Hartex Softener DW is a 100% liquid cationic softener having ready solubility and excellent resistance to yellowing under high heat. It contains no inert ingredients and exhibits remarkable economy in producing soft pliable hands on all types of cellulosic and synthetic fibers while improving the sewability of the fabric. It can readily be applied by exhaustion from the usual dyeing equipment. Hartex Softener DW is compatible with thermosetting resins and catalysts and can be applied in the resin-treating bath to give desirable hand on crease-resistant, schreinered, glazed and embossed finishes.

Softyne Special is a non-ionic softener recommended for the lubrication and finishing of all natural and synthetic fibers in thread, yarn, woven or knit forms. It shows outstanding resistance to yellowing under high temperatures and has no effect on the shade of dyes. Softyne Special imparts excellent softness, lubrication and sewability



SMOOTH RUNNING...

Like to hurdle high production costs . . . set new records for trouble-free spinning and twisting? Smooth-running National-Sterling Ring Travelers can put you on the right track!

Carefully made to meet the most exacting standards, National Travelers assure the ultimate in precision balance and uniformity of weight, dimensions, temper and finish. Their flawless performance consistently produces more pounds of first class yarn . . . at higher spindle speeds . . . with fewer ends down.

Whatever fibers you are running — cottons, wools, synthetics, or blends — it will pay you to let an experienced National-Sterling Engineer recommend the *right* traveler for your particular operation. For prompt service, write, wire or phone National Ring Traveler Company and Sterling Division, 354 Pine Street, Pawtucket, R.I. Southern Office and Warehouse: P. O. Box 293, Gaffney, S. C.

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Sterling
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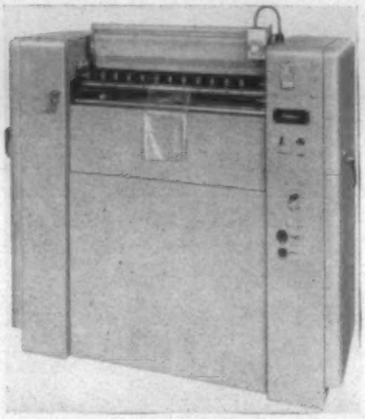
characteristics to the fibers and provides good anti-static properties. Softyne Special is available as a readily-soluble paste and can be applied from a short bath in the usual padding equipment.

(Request Item No. K-22)

Bag-Maker And Sheeter



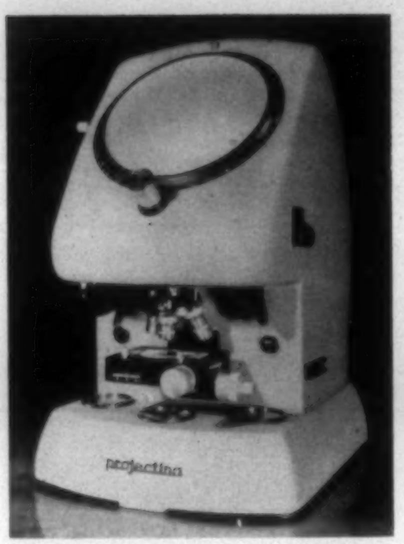
Deluxe Model 24-100 LectrOmatic Bag-Maker and Sheeter (LectrOmatic Devices Inc.)

The use of clear plastic materials for packaging all types of products has been made easier and more economical than ever before, according to LectrOmatic Devices Inc., makers of the new LectrOmatic Bag-Maker and Sheeter. The firm's Deluxe Model 24-100 is said to provide up to 60% faster output of polyethylene bags (from either tubular or gusseted stock) or of flat sheets. The unit can be used as a bag-maker or sheeter without changes, it is claimed. Both bags and sheets can be of any desired length up to 100", from stock rolls up to 24" wide.

Used as a bag-maker, the LectrOmatic automatically measures, cuts and seals one end, the company states. Standard-equipped with two stock shafts, the unit permits running two up. Narrow widths can be run three or more up by adding extra roll racks, for which provision is made in the unit. Skirt size on bags is adjustable from ½" to zero. A thermostatically-controlled sealer bar with dial adjustment insures the precise heat required. Dwell time is adjustable from zero to two seconds. The unit will cut and seal "poly" up to a total thickness of 20 mils. As a sheeter, the unit automatically measures, cuts and dispenses sheets from rolls of Saran, cellophane, Mylar, foil, paper and the like.

(Request Item No. K-23)

Optical Testing Device



The Projectina optical precision unit (Alfred Hofmann & Co.)

Projectina is the name of a Swiss perfected optical precision unit, introduced in the American market by Alfred Hofmann & Co. Created for more economical inspection methods in research and quality control, it combines into a portable, streamlined housing—Microscopic-Projector-Comparator-Camera. By fitting a simple adapter to the observation face of the instrument, any image previously projected on the screen in the magnification range 7x to 2,000x may instantly be photo-recorded with either the Graflok Back or Polaroid Land Back in black and white or color.

Micro pictures may be seen on an effective 7" ground glass screen and also through the eye piece, at a constant scale, without refocusing. Powerful built-in illuminators allow for easy microscopy and projection in transmitted bright and dark-field as well as surface bright and dark-field. The light intensity is variable by finger-tip control. Stationary stages for large specimens, mechanical stages with vernier reading of 1/10 m.m., and high precision mechanical stages that permit the reading of 1/1,000 m.m. on the measuring knobs combine for added versatility and accuracy.

The total range of vertical adjustment is sufficiently great to permit comparatively thick specimens as well as appropriate fixtures or accessories to be mounted on the stage. For continuous observation without strain, the location and slight inclination of the screen have been carefully chosen, so that it will be on a natural level of vision with the operator in sitting position. Standard screens are offered in a choice of eight variations—from plain to vernier or angular reference lines. All screens interchange readily and always maintain exact magnification. (Request Item No. K-24)

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C-B Boilers

One of the latest devices to be incorporated on Cleaver-Brooks Co.'s line of Model CB boilers is a single tip retractable nozzle that simplifies cleaning of the burner nozzle. While the idea of a single tip nozzle is not completely new, Cleaver-Brooks' design is equipped with distinctive flexible lines which allow the nozzle to be inspected without removing any bolts. The single tip nozzle offers more stable combustion and more positive mixing action of oil and air. The nozzle is fully retractable on Model CB boilers, 60 h.p. and larger. A small vise conveniently located on the boiler head is used to remove nozzle tip quickly and easily. On combination oil-gas fired models, the nozzle can be withdrawn from gas firing position to bring the nozzle out of the radiant heat zone. This prevents vaporization of oil which may still remain within the nozzle.

The retractable nozzle was developed after considerable testing. It offers the boiler user greater convenience as well as improved performance. The Model CB boiler

GWALTNEY SPINNING *by* SACO-LOWELL

Creating new standards of production in over 85 profit minded, cost conscious mills

Gwaltney Spinning Frames have demonstrated beyond doubt, through their outstanding performance, that they produce stronger, far more even yarns, of higher grade than the same count yarn produced from the same stock by "yesterday's" spinning. . . . This noticeable improvement in quality has occurred with lower operating costs and increased production. All result in higher profits.

Why wait . . . join the trend toward Gwaltney. A Saco-Lowell Engineer will gladly prepare a **"Forecast of Savings"** based on a **Saco-Lowellizing Program** which includes Gwaltney Spinning for your mill.

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incorporates the latest design advances in modern packaged boiler construction, including 4-pass construction, forced draft, updraft construction, and 5 sq. ft. of heating surface per boiler horsepower. A vibrationless impeller, mounted directly on the blower motor shaft, provides unusually quiet operation. The sound is muffled within the front head.

(Request Item No. K-25)

Overhead Fork Lift

A new, heavier, more versatile overhead fork lift has been developed by the Cleveland Tramrail Division, The Cleveland Crane & Engineering Co., that embodies many new features and refinements made since the first unit was put into operation nearly 30 years ago. When on a Cleveland Tramrail crane, it can be traveled to front, rear or either side of a building, up, down and turned through a full circle clockwise or counterclockwise. The overhead fork lift is particularly advantageous for handling and storing materials in warehouses such as boxes, crates and rolls of cloth.

Overhead fork lifts enable obtaining maximum efficiency from warehouse space. Materials can be piled higher and aisleways can be reduced in width. Therefore, more cubic footage can be devoted to storage. A fork lift usually increases the storage capacity of a building by 25% to 100%. In warehouses where only one overhead fork lift is required, the entire handling and storing job can normally be taken care of by one man. His work is safe and easy, consisting of little more than the manipulation of push buttons. He has full vision for all positions of his work. Because of the flexible control cable, he can operate the unit at a safe distance from the load. Where desirable, a cab or platform can be provided for the operator. There is no danger from unbalanced loads, because they are suspended from above. Complete selectivity of stored materials is possible, when arranged properly, permitting immediate withdrawal of any items in a warehouse without moving others.

There is no problem with floor wear and costly maintenance, because the entire operation is above the floor. Nor is there any battery charging expense or gasoline engine repairs to contend with. Dependable electric motors requiring nothing more than periodic lubrication power Cleveland Tramrail fork lifts. The fork lifts are available for various capacities and lifts. They can be supplied with all motions, motorized or manually operated, or any combination thereof. If not required, the rotating motion can be omitted. Units can be telescoping type or non-telescoping. The former type permits unobstructed use of aisleways when in raised position. The telescoping type also makes possible travel over railroad cars and trucks, thereby enabling the handling of materials directly to storage without transferring to other conveyances. Forks are easily adjusted to accommodate width of materials handled and can be furnished to serve both sides of an aisleway for non-rotating type fork lifts. Forks can also be made of various sizes and shapes to suit specific needs.

(Request Item No. K-26)

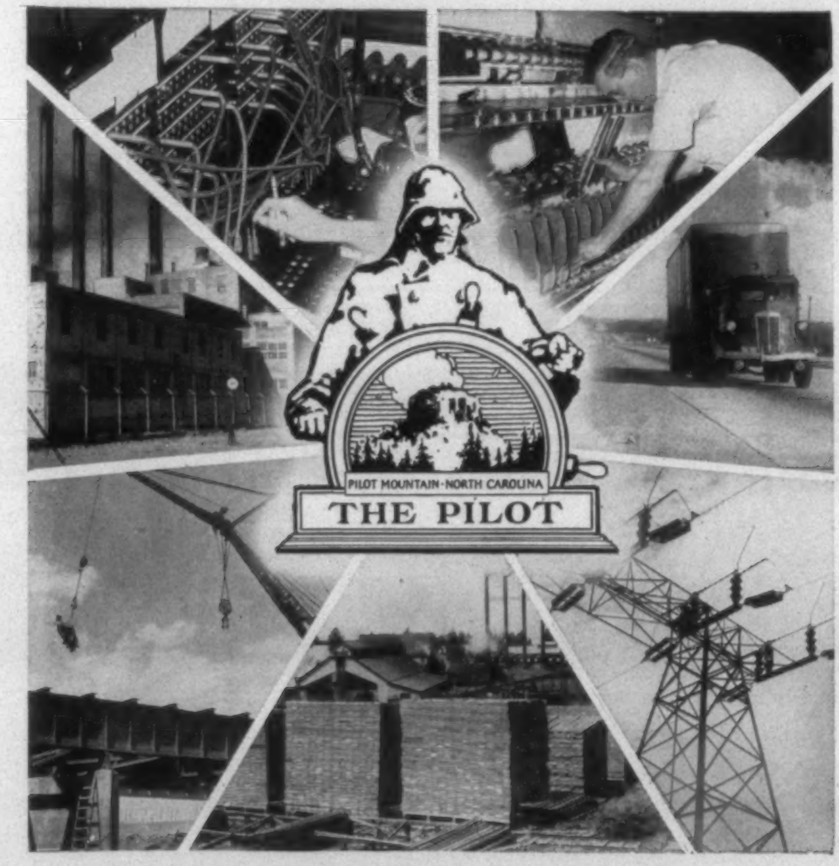
Reeling Machine

Stellamcor Inc. has announced that it is handling the sales for a special change reeling machine, for carpet yarns, manufactured by Croon & Lucke of Germany. The reeling machine is sturdily built for heavy sized yarns. The continuous change of the two reels enables the operator to run the machine continuously. The circumference of the reel is infinitely variable for all hank sizes. The machine has electric stop motions, rapid braking devices, tachometers, counters for automatic make-up of precise lengths of skeins and weights of hanks. The yarn is wound from flanged type spinning bobbins for the production of heavy types of yarns, especially carpet yarns.

(Request Item No. K-27)

Chain Oilers

Trico Fuse Mfg. Co. has announced a new device for automatically applying a film of oil to chains, gears, slides or irregular surfaces. Oilers can be mounted at any convenient location and oil is released by gravity from the reservoir either manually or electrically to oil applicators. Precision



The Pilot works with management — building business by protecting workers!

From the telephone switchboard to the textile mill the protective arms of The Pilot cover all phases of Southern industry. Individually tailored group insurance programs stimulate profits and production by improving employee relations, reducing labor turnover, and attracting competent help.

Do You Have a Group Insurance Plan? Write or Wire

Pilot Life Insurance Company

GROUP DIVISION • GREENSBORO, NORTH CAROLINA
PILOT TO PROTECTION SINCE 1903 • O. F. STAFFORD, PRESIDENT

needle valves on the dispenser, which require no further attention after initial setting, meter just the right amount of oil to applicators. Various manifolds are also available which can be connected in series so that only one dispenser is needed for as many as 12 outlets. For limited or hazardous locations, dispensers can be mounted at a distance from the area to be lubricated, oil being supplied by means of plastic or copper tubing to the manifolds and applicators.

The specially designed applicators, not ordinary bristle brushes, withstand temperatures up to 275° F. and can be trimmed to any width to avoid overhang and consequent side dripping. They do not spread or become distorted, therefore constant rotating for even wear is unnecessary. Trico chain oiler reservoirs and sight fittings have crystal clear pyrex glass or shatterproof lucite cylinders so that oil supply is always visible.

(Request Item No. K-28)

For the Mill Bookshelf

Triple Stage Upright

An 8-page fold-out brochure describing the specifications and operation of the Clark Equipment Co.'s new triple stage upright for fork trucks has been made available by the company. The device is a 3-section, telescoping upright which raises high enough to permit ceiling-high stacking and retracts low enough to pass through boxcar doors. Photographs illustrate the triple action of the upright. A dimension table for the 11 standard sizes of the unit shows what over-all height of upright will be when forks are at any height from 15" to 216". (Request Item No. K-29)

Woolen Lubricants

The E. F. Houghton & Co. has published a revised listing of its stock lubricants for woolen and worsted fibers. In this group will be found a fiber lubricant for every purpose, ranging from low cost lubricants for medium grade woolens to the finest of worsted fibers and fabrics. These products have excellent stability and scour out easily, according to the company. Some of the products have built-in anti-static properties. Each of these products is said to represent excellent value from the standpoint of performance and yield.

(Request Item No. K-30)

Starch Components

Publication and availability of a new 12-page booklet on Superlose and Ramalin (amylose and amylopectin) has been announced by Stein Hall & Co. Inc. The brochure entitled, "Superlose and Ramalin New Products Bulletin," describes the physical and chemical properties possessed by these two principal components of potato starch. (Request Item No. K-31)

Speed Measurement

Methods of measuring speed to 0.1% accuracy through use of the General Electric Co.'s type HE potentiometer recorder are described in a new brochure designated GET-2741 (2) and (3). The speed deviation recorder (2) is used in the textile industry to measure per cent deviation from a predetermined optimum speed. The multi-range expanded scale speed recorder (3) is used for accurate speed measurement over wide ranges in continuous processes. Separate bulletins are also available on the basic instrument — the potentiometer recorder (Bulletin GEC-1377) and the tachometer generator (Bulletin GEC-1258) used with the recorder. The literature may be obtained together or separately by using this journal's reader service request card.

(Request Item No. K-32)

Slasher-Size Controls

The Powers Regulator Co. has published a new manual for the textile process engineer which includes detailed technical information. Entitled "Slasher and Size Room Controls Manual," the publication contains eight specific slasher-size room control systems available from the company. The 64-page manual describes systems and equipment for kettles, size boxes, overwaxers and slashers. Level control systems for size boxes and cooking kettles are also described. The manual can be obtained by using this journal's reader service request card.

(Request Item No. K-33)

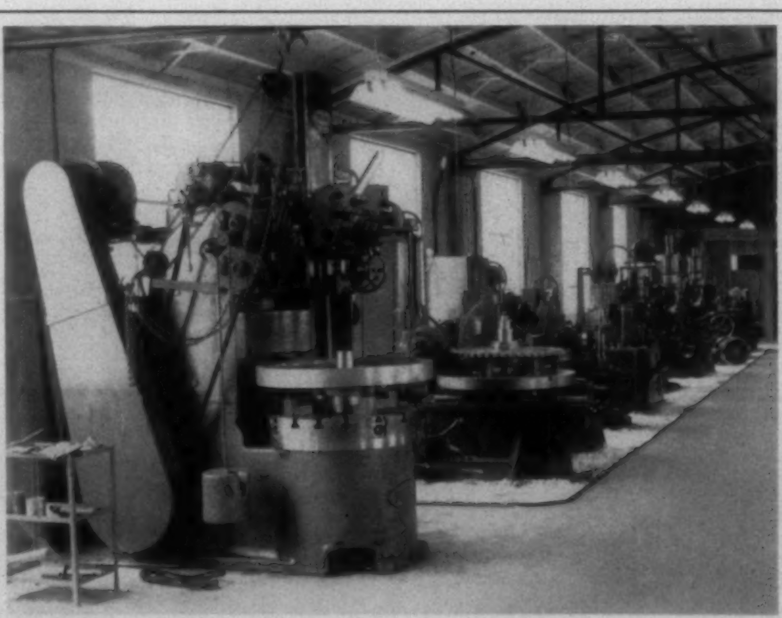
Printing Paste

A circular has been released by General Dyestuff Co., a division of General Aniline & Film Corp., describing its Indanthrene Printing Brown HRR Suprafix Paste. The new product is a straight, modified-anthraquinone vat dyestuff offered for printing bright reddish browns of superior light and wet fastness on cotton, rayon and linen. The new brown offers 3 advantages over the older vat browns and brown combinations used for printing; (1) economy; (2) fastness of shade to resin finishing; and (3) tendering of cellulosic fabrics upon exposure to light. The new paste in full prints displays excellent-to-outstanding (7-8) fastness to light on both cotton and rayon with the rating one unit lower for 2% prints. The fastness properties of full shades to both A.A.T.C.C. Wash Test IV and 0.3%-active chlorine are very-good-to-excellent (4-5) which is adequate for stringent requirements.

(Request Item No. K-34)

Goodyear Resins

The chemical division of The Goodyear Tire & Rubber Co. has announced the release of two new bulletins covering its copolymer dispersion resins. TBF 57-86 describes the chemically blown Pliovic AO Foams. TBF 57-91 describes Pliovic AO dispersion resin for fabric backings. The literature tells of new applications for the products which are being developed. In



SOUTHERN GEAR WORKS is now in full operation at its new home on the New Dallas Highway, Gastonia, N. C. The firm, which was formerly housed at 616 East Franklin Avenue in Gastonia, specializes in precision gears for the textile industry. It is also fully equipped to turn out sprockets, V-pulleys and hardened and grounded studs. Fred Farrar is president and treasurer of the firm, and Garland Propst is superintendent.

addition, the company has made available another bulletin, 57-101, which lists manufacturers of compounding ingredients.
(Request Item No. K-35)

Water Softener

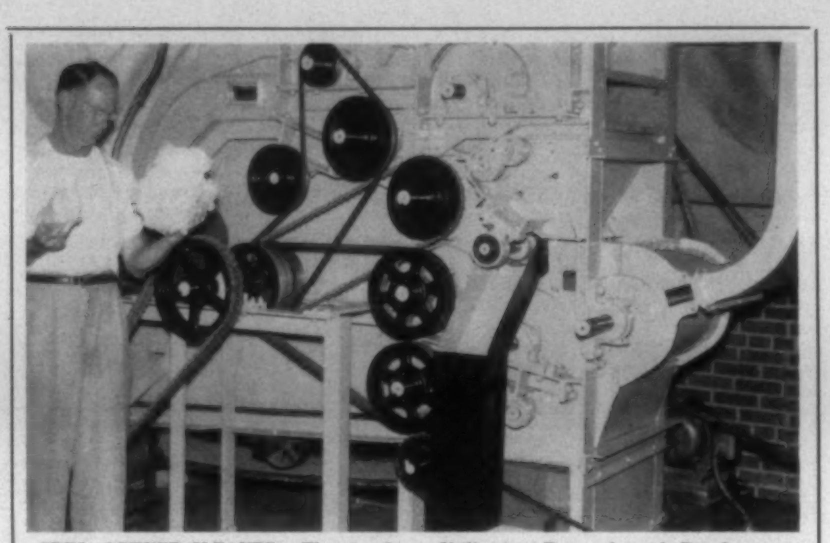
Features of zeolite water softeners made by the Allis-Chalmers Mfg. Co. which assure efficient, dependable and easy operation are described in a new bulletin released by the company. The bulletin explains how the company's standard units can be easily adapted to meet individual plant requirements where the applications involve elimination of costly maintenance due to scaling of boilers, pipes and heat exchange tubes; the production of chemically suitable water for dyeing, and the correction of other special water problems. The flexibility of the company's standard designs permits selection of a variety of features and sizes to meet individual installation requirements. These include completely automatic operation and zeolite materials to meet local water characteristics.
(Request Item No. K-36)

Regulator Valve Sizings

A new 4-page bulletin, J-SC, showing how to size O.P.W.-Jordan sliding gate regulator valves has been released by Jordan Corp. Technical data, applying to all makes of valves, tells how to adjust sizing for variations in pressure, temperature, viscosity, specific gravity, etc. Charts cover steam, liquid and gas services.
(Request Item No. K-37)

Niacet Vinyl Acetate Monomer

A new 16-page booklet on Niacet vinyl acetate monomer has been released by Union Carbide Chemicals Co., Division of Union Carbide Corp. This booklet has sections on operating procedures, physical properties, specifications, shipping data, applications, polymerization techniques, analytical procedures and physiological properties. Niacet vinyl acetate is an economical monomer that forms polymers having adhesive and film-forming properties adaptable to many uses. Niacet vinyl acetate is widely used in the manufacture of textile finishes where it is often used in combination with other vinyl monomers and with acrylic monomers. (Request Item No. K-38)



SRRL OPENER-CLEANER—The Southern Utilization Research and Development Division of the Agricultural Research Service, U. S. Department of Agriculture, reports that its new SRRL Opener-Cleaner incorporates in a single unit the original SRRL opener and a highly efficient cleaner. The new unit reportedly combines the superior opening and blending of the SRRL Cotton Opener with an average cleaning efficiency of 35 per cent and a lint loss of about half that of existing textile cleaning machines. The unit requires only a little more floor space than the original SRRL Cotton Opener and no additional horsepower, it is said. The new machine is covered by U. S. Patent No. 2,780,839, now available for licensing on a royalty-free, non-exclusive basis.

Extremultus Catalog

A new catalog has been issued by Extremultus Inc., manufacturer of the new type of power transmission belting made of polymer and chrome tanned leather. The catalog contains sections on significant applications, a description of the belt, selection of the proper belt type, tensioning and maintenance, and bearing load reduction. Free copies may be obtained by using one of this journal's reader service request cards.
(Request Item No. K-39)

Flexible Couplings

A new book describing the Link-Belt Co.'s complete line of improved geared flexible couplings is now available. Book 2775, a completely new 12-page publication, details pertinent application and selection data for couplings with maximum bores ranging up to 7" and ratings from 2½ to 572 h.p. per 100 r.p.m. Link-Belt's design of geared flexible couplings provides extra large bore capacity in proportion to outside diameter. It transmits more power, size for size, than other comparable couplings. Housing halves are of forged steel solidly joined by hardened and ground socket head

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through bolts with lock nuts, arranged for one-tool assembly. An effective quad-ring hub seal retains lubricant and excludes dust, water or other destructive matter. The design provides for reasonable parallel and angular misalignment with a minimum of backlash. Wide faces of internal gear teeth allow end float of connecting shafts while maintaining full tooth contact. Book 2775 details four basic applications, each available in ten standard sizes: (1) Type SG—standard coupling for close-coupled direct-driven industrial equipment; (2) Type SGE—spacer coupling to connect shafts that are separated by relatively short distances. Design permits removal of entire coupling without disturbing mounting or alignment of connected machinery; (3) Type SGM—mill motor coupling for use with mill motors, compressors, etc., where one or both of the shafts is tapered; (4) Type SGS—single engagement coupling, customarily used in pairs with a floating shaft for connection of remote shafts.

(Request Item No. K-40)

Liquid Level Gages & Valves

Jerguson Gage & Valve Co. has issued a new catalog on its complete line of liquid level gages and valves. The new literature illustrates standard and special function gages and valves; gives dimensional drawings, construction features, pressure-temperature graphs and ratings, materials, and tables of sizes, specifications and standard and optional features.

(Request Item No. K-41)

Plasticizer

Technical Bulletin No. 401, covering a new plasticizer, Plastolein 9078 LT Plasticizer, is available from Emery Industries Inc., manufacturer of the new product. The bulletin describes the properties of this relatively low cost, low temperature plasticizer. It also details the new product's performance advantages in vinyls, as compared to currently available adipates.

(Request Item No. K-42)

Quality Cones For Knitting

The latest issue of "Foster Facts," a pamphlet published now and then by Foster Machine Co., is devoted to the topic, "How To Get Quality Cones For Knitting." The purpose of the article is to show that knitters who are equipped with Foster Model 102 or Model 75 winders have it within their power to produce cones which will keep trouble at the knitting machine to a minimum. (Request Item No. K-43)

Safety Slogans

The National Safety Council has published a new booklet containing more than 1,000 slogans to fit any safety situation. The booklet is designed to assist in the effectiveness of accident prevention programs. Copies of a flyer giving information on how to order the booklet can be obtained by writing the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

WHAT HAS STONEHENGE TO DO WITH TEXTILE HARD CHROMIUM PLATING?

England's STONEHENGE is one of the world's most celebrated stone constructions. Evidently a prehistoric temple, it consists of four tremendous concentric enclosures formed by massive upright blocks of stone, each over 13½ feet high, with some piled, bridge-like, one on another. How primitive Britons accomplished this engineering marvel we can only surmise; the fact remains that to preserve the sanctity of their god they erected a structure which has endured over 3600 years.

Even prehistoric man recognized the value of good workmanship and quality materials when aiming for longer-lasting endurance. Let us show you how WALHARD Hard Chromium Plating can give your parts more permanent protection and save you money in maintenance and down-time costs. Try WALHARD on your next Hard Chromium Plating order, and you'll find you're getting the *best* quality, the *best* service, at no *extra* cost.

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Serving The Textile Industry

Uster To Show Testing Instruments In Dallas

Textile people in the Southwest will have the opportunity to view in operation the Uster Corp.'s new continuous quality control testing instruments at a showing to be held at the Hotel Adolphus in Dallas, Tex., December 4-5. General interest in the new Uster Spectrograph, Hy-Lo Indicator and Custom Tension Recordograph is high and while particular emphasis is to be placed on these instruments, the entire line of Uster testing equipment will be shown.

N. C. Machine Firms Enter Joint Venture

A corporation has been organized in Gastonia, N. C., by five firms allied to the textile industry to work collectively on jobs that each individual firm cannot do alone. Manufacturing & Engineering Co. Inc. is the name of the new company. It has authorized capital stock of $100,000 consisting of 1,000 shares. There are 750 shares of $100 common and 250 shares of $100 preferred.

Officers of the new firm are John Cocker III, Cocker Machine & Foundry Co., president; Robert Michael, Fallston Engineering Co., vice-president; and Bynum Carter, A. B. Carter Inc., secretary and treasurer. In addition to these officers the board of directors of the new firm includes Robert Stine, Ferguson Gear Co., and Sam Tull, Gastonia Roller, Flyer & Spindle Co. The new corporation will do all kinds of work in metal and machine work for textile manufacturing and engineering.

National Starch Products Reports Increased Sales

In a financial report covering the first nine months of 1957, National Starch Products Inc. and its subsidiary companies report a 16% increase in sales over the comparable 1956 period. Net sales for the first three quarters totalled $33,093,441 as compared with $28,543,413 in 1956. Net income after taxes during the same period increased 35%, from $1,531,672 in 1956 to $2,073,734 in 1957.

Metro-Atlantic Expands Its South Carolina Operations

Metro-Atlantic Inc. has announced the completion of its building program in Greenville, S. C. A new manufacturing plant has been built and new boiler and reaction kettle installed. This will enable many products to be manufactured in the Southern location that had formerly been produced at the company's Rhode Island installation.

New control, analytical, application and service laboratories have also been built and additional laboratory assistants employed, which will enable the Greenville plant to offer the finest technical service possible to the Southern customers. In line with the expansion program, new loading and unloading facilities have been installed along with large storage tanks. Additional trucks have also been placed in operation to provide better service.

James Hunter Inc. Buys Frank F. Fuller Co.

All facilities, assets and good will of the Frank F. Fuller Co. have been purchased by James Hunter Inc., Greenville, S. C. The purchase of the Fuller company will permit the new owners to add spraying systems for textile applications to its expanding line of textile equipment. James Hunter Inc., a subsidiary of the James Hunter Machine Co., North Adams, Mass., currently supplies the industry with a line of textile fiber feeding and blending equipment, materials handling systems and the new Hunter bobbin holder for spinning frame creels.

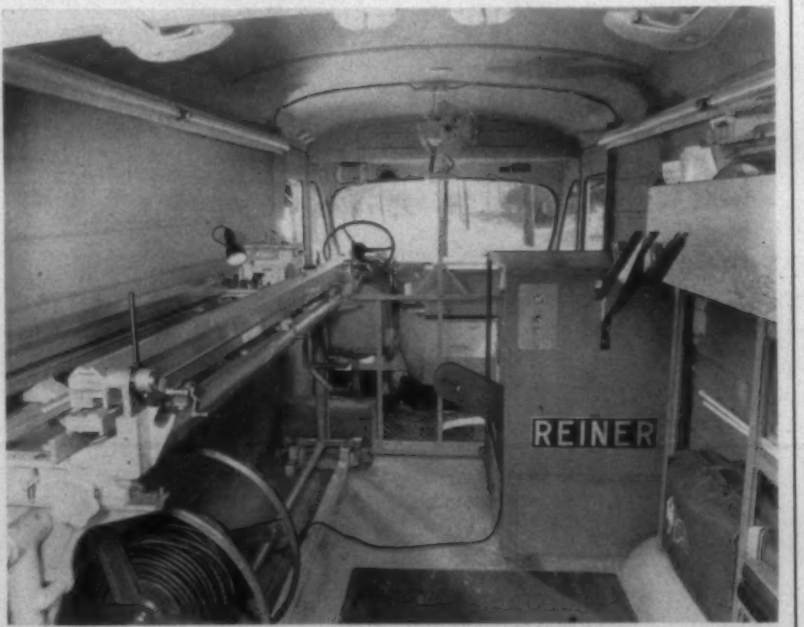
C. G. Sargent Expands New England Fabrication Facilities

C. G. Sargent's Sons Corp., Graniteville, Mass., designers and manufacturers of textile machinery, have purchased the property formerly known as the Abbot Worsted Mills in Graniteville. The purchase includes the mill building of 56,000-sq.-ft. and a separate, adjacent office building. The company will occupy a substantial part of the space immediately for expansion of its fabrication department.

Sun Chemical To Acquire Pigment Manufacturer

Sun Chemical Corp., Long Island City, N. Y., has announced that it has signed a contract to purchase Ansbacher-Siegle Corp., leading independent pigment manufacturer. The purchase price is 225,000 shares of Sun's common stock. The contract has been approved by the boards of directors of both campanies, subject to the approval of Sun's stockholders.

The newly acquired company's sales exceeded $4 million in the fiscal year just ended and it is one of the largest and oldest independently owned organic color pigment manufacturers in the U. S. Its high quality pigments are used extensively in the manufacture of textile printing colors



RIGHT TO YOUR FRONT DOOR—Robert Reiner Inc., Weehawken, N. J., is using a new sales approach. The firm recently bought and equipped a demonstration truck to bring Reiner equipment right to the mill. The sales truck is being operated by William Whary, a long time Reiner employee known to many mill men. In charge of the work and the machines on demonstration is Walter Horn, who has been in warp knit, creel and warping sales work at Reiner for many years. In addition to the equipment shown here, the truck carries a full line of Reiner catalogs and other pertinent matter.

which are produced by the Sun firm. As a division of Sun, Ansbacher-Siegle will continue to operate under its present management. This acquisition will considerably broaden Sun's pigments operations.

Roberts Management Club Holds Initial Meeting

The first meeting of the Roberts Management Club was held recently by Roberts Co., spinning frame manufacturers of Sanford, N. C., with the above four executives discussing progressive management with the 70 club members. They are: *(left to right)* Robert E. Pomeranz, president; Dr. Wendell M. Patton, assistant general manager of Shuford Mills, Hickory, N. C., the guest speaker; David E. Henderson, vice-president of Roberts; and Warren R. Williams, a member of the Roberts board of directors.

The club has as its members all resident salaried men of Roberts Co., and has as its principal purpose the establishment of a supervisory and executive training program, and the general goal of broadening the company and its management people for the expanding responsibility which lies ahead. It also serves as a means of providing a social atmosphere for its members, and for the members' wives from time to time.

Mr. Henderson served as club chairman and introduced Mr. Pomeranz, who offered some keynote remarks on the values that could come from the meetings of the club scheduled to take place one evening each month.

Celanese Plans Expansion Of Polyvinyl Acetate Production

Celanese Corp. of America, Charlotte, N. C., has announced that it has started construction of a new manufacturing unit at its Belvidere, N. J., plant to increase its production of polyvinyl acetate emulsions which are now being manufactured at the company's Linden, N. J., plant. The largest uses of polyvinyl acetate emulsions includes the manufacture of non-woven fabrics and in textile finishes. Production of these emulsions is a new activity for the Belvidere plant which turns out cellulose acetate and cellulose propionate molding powders, and cellulose acetate extruded and cast film.

Cyanamid Includes Creslan In Rockefeller Center Exhibit

The first public showing of Creslan, American Cyanamid Co.'s acrylic fiber, is one of the features of the company's new permanent exhibit center which opened in Rockefeller Center, New York City, October 30. Richly colored samples of Creslan staple and yarn, emphasizing the fiber's superior dyeability and photographs and sketches showing Creslan in anticipated end-uses are among displays of the company's wide range of textile products.

At the same time, the company announced that construction of its modern fiber plant near Pensacola, Fla., is progressing and that plans are being made for initial marketing of the new fiber late next year. The company said that more than one-quarter million hours of wear testing, involving almost 1,000 persons and many Creslan end-products, have been reported and evaluated to date. When introduced to the consumer next year, the company said that Creslan will be backed by the most extensive wear testing program ever given to a new fiber.

The fiber's potential applications include jersey and other knitwear, men's and women's wear suitings and coatings, shirting and dress fabrics, hosiery, simulated fur fabrics, children's wear fabrics, blankets, carpets and rugs, and home furnishings and industrial fabrics. Pilot products in most of these end-product areas have already been subjected to wear testing.

Fastener Corp. Moves Office To Recently Constructed Bldg.

Fastener Corp., manufacturer of Duo-Fast industrial stapling machines, has moved its offices to a new building located adjacent to the company's manufacturing facilities on a 30-acre industrial site in Franklin Park, Ill. The building is of ultra-modern design, both inside and out. Ninety per cent of the structure's facade and back wall is glass. The balance is crab orchard stone. The interior furnishings are in keeping with the building's modern design.

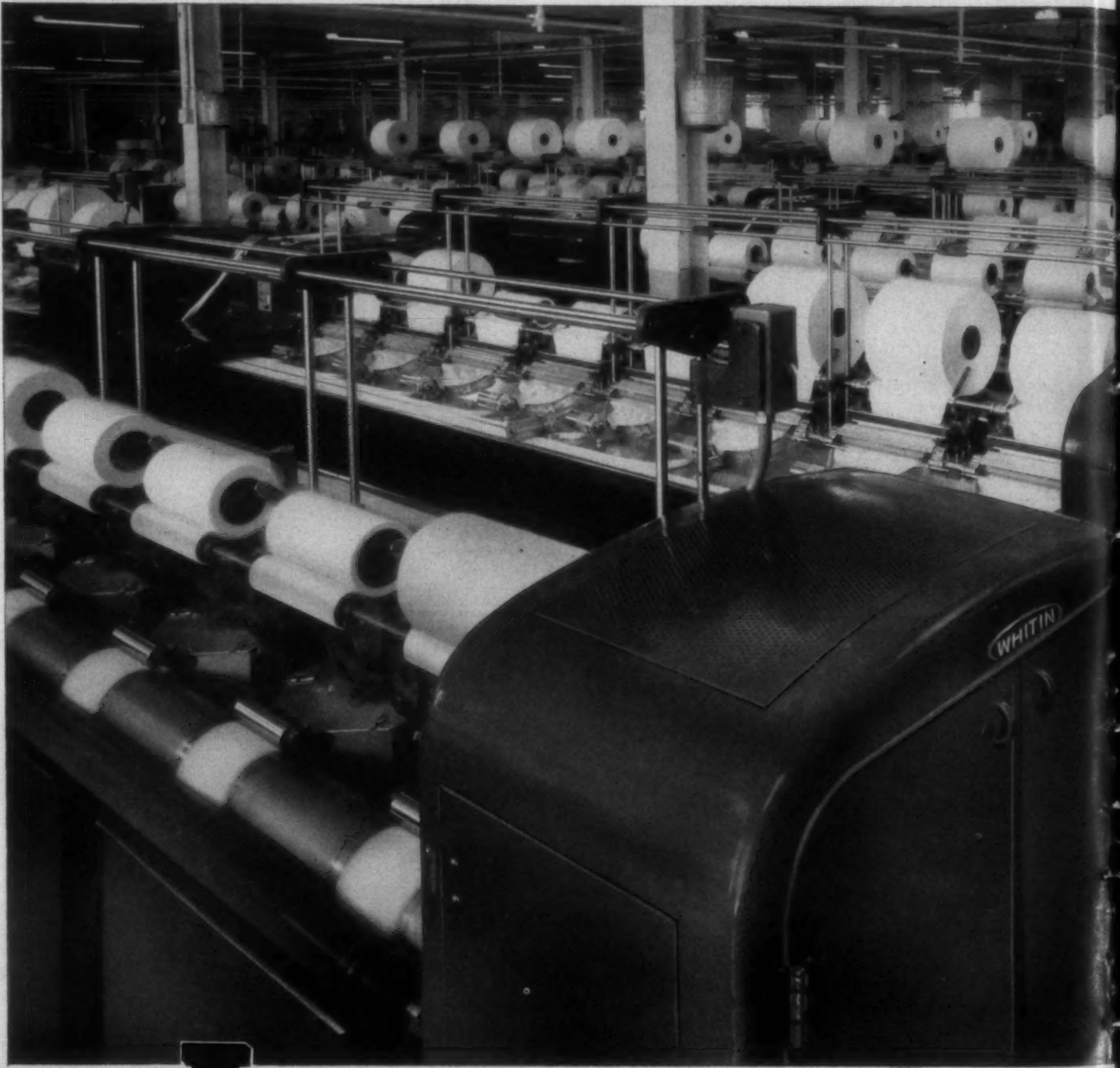
The office proper occupies the upper level, with office spaces arranged around the periphery of the building. Each has natural lighting from the floor-to-ceiling windows. A sunken garden occupies the center area of the office interior. The lower level has been functionally designed with meeting rooms, lounges and a completely equipped kitchen. Year around working comfort is assured by a fully-automatic heating and air-conditioning system.

Talcott Reports Best Nine Months In History

James Talcott Inc., one of the country's oldest and largest factoring and commercial financing organizations, founded in 1854, has reported that the first nine months of 1957 were the best in the firm's history. Consolidated net income for the period ended September 30 amounted to $1,334,533, compared with $1,072,143 for the same period of 1956. After provision for Federal taxes and preferred dividends, earnings were equal to $2.02 a share on the 590,290 shares of common stock outstanding September 30. In the same nine months of 1956, earnings after provision for Federal taxes and preferred dividends were equivalent to $1.82 a share.

WHITIN CONDUCTS WINDER SEMINAR—Sales personnel from branch offices of the Whitin Machine Co. recently attended a three-day winder seminar at the company's research division, Whitinsville, Mass. Among those in attendance were *(left to right)* R. F. Waters, winder sales manager; J. H. Bolton Jr., director of sales; W. G. Stainton, Atlanta sales office; B. C. Grieb, manager, Charlotte shop; J. L. Orr, Spartanburg office; H. B. Patterson, Greensboro office; and R. I. Dalton Jr., Charlotte office. Altogether some 18 members of the firm participated in the seminar. The balance of the sales force will be similarly instructed on a rotating basis in later sessions to be scheduled. The purpose of the seminar was to display and explain Whitin's complete line of winder products, demonstrating the sales features of each. The seminar was set up under the direction of Messrs. Bolton and Waters.

Now.. Whitin presents the



Higher production rates up to 50 lbs./hr. (at 100% efficiency) and greater nep removal are performance features of the new Whitin Super J Comber. Its constructional features have been thoroughly proven in mills all over the world. The comber operates at a constant 150 nips per minute, 20% faster than other combers, producing very even, high quality sliver, with extremely accurate waste removal.

SUPER J COMBER

Featuring...

- **Higher Production**
- **Greater Nep Removal**
- **Unsurpassed Sliver Quality**
- **Lowest Maintenance and Operating Costs**

• CONSTRUCTION FEATURES •

- 8 heads, single side
- Extremely precise construction
- 50% fewer parts than competitive combers
- New spring cushion plate, heavier detaching rolls and weighting, signal lights, lap run-out and knock-off motions
- Unique, simple detaching motion
- Bi-Coil or single sliver
- Unit assemblies

• OPERATING FEATURES •

- Simple to operate
- Efficiency up to 97%
- Low production cost/lb.
- Maintains settings between annual overhauls
- Simple setting, timing and waste control adjustments
- All heads set identically
- Total repair and maintenance costs 1/10th or less than competitive combers

For complete information ask your Whitin representative or write direct to us.

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WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

More than one person in Washington today feels that while the Administration is fixing up the parlor, and watering the flowers, the back end of the house is on fire. Squabbles over race mixing and the chasing of Negro votes is getting more attention than co-ordinating world defense against Communism. While industrial power is going into luxuries and non-essentials, Russia is setting off space missiles and getting into position for hot war world conquest.

Leaders of the N.A.A.C.P. are shifting their integration battlefront from schools to industry, and are ready to put pressure on employers to open up more jobs to Negroes in stores, factories and services. They intend to concentrate the drive on Southern states, and look to the Department of Justice for help. While demanding that employers hire more Negroes, they are moving against separate eating places, separate rest rooms and non-integrated unions. Negro employees are asked to file complaints if they see "discrimination" in hiring or upgrading.

Attorney General Brownell's approaching retirement became known early in October just after Governor Faubus refused to accept a White House written statement as his own. But his impending retirement has been "in the air" all year. There are two reasons. He is really Tom Dewey's choice to run for governor in New York next year when it is thought he can capture the big New York Negro vote. Secondly, he does not wish to face a drastic going-over by a Congressional committee on the question of legal authority to send Federal troops to Little Rock to quell a street commotion.

William Rogers, Brownell's successor, has been directly in charge of the drive to mix races in schools and uphold the integration decision. He is being strongly supported by Vice-President Nixon, the N.A.A.C.P., and the united pressure groups pushing for integration.

Eisenhower forces have made inroads in the South in the last two elections, but now, it is contended, Little Rock has swept all of that aside. There are no Eisenhower Democrats in the South any more, it is said, and very few Eisenhower Republicans. The race issue has politically isolated the South. It is asserted that while there is "little room for a States' Rights Democrat in the Republican fold," the issue cannot fail to widen the North-South rift of Democrats.

There is little likelihood a third party movement would extend as far as putting up candidates for Congress, or removing the Democratic label from them. Such a change would deprive Southern members of their powerful committee chairmanships in a Democratic Congress, or their top minority rank in a Republican Congress. Electoral votes could be withheld from the nominee of either party for top office, and selection of the next President thrown into the House. Each state would have one vote, and the candidate getting 25 or more votes would be elected. Either of the old parties could win by merely having had elected a majority of House members in 25 Northern and Western states.

G.O.P. House leaders are already starting next year's campaign, to try to do what they have not done in three elections: Take Congress away from the

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1926 "IF IT'S PAPER" 1957

Democrats. Local workers are being told there are no gains to be made in hitching a ride on Eisenhower coat-tails; it will cost more votes than it will gain. They have been told also to endorse only the Eisenhower policies that will help locally.

Secretary of Agriculture Benson is not expected to be around very much longer, and his successor is already being sought. His "farm relief scheme," based on artificially created food scarcities, is not working. With customers complaining of high food prices, and the farmer persisting in the notion if he has land he should grow something on it, the Administration believes that some other way that appeals to common sense must be found. Farmers say it is only bungling interference with natural farming and marketing now. This year's harvest is big; not the little one that was wanted.

The egg throwing incident in North Dakota involving Mr. Benson is having deep political repercussions. Hard pressed and harassed G.O.P. chieftains are urging he quietly step out before Congress reassembles, and save the Administration even greater harassment. Benson's policies are already tabbed as a major political target in the Democratic controlled Congress. The Administration does not want a full scale airing of its farm policies ahead of next year's election.

Sherman Adams' monopoly in handling problems "without bothering the President" is stirring criticism high up in the Administration. Officials near the top complain of inability to reach the President, and of summary short shift by the cold and austere Adams. He is increasingly taking over disposal of matters that have always rested with the President, and doing so without regard to feelings or tempers.

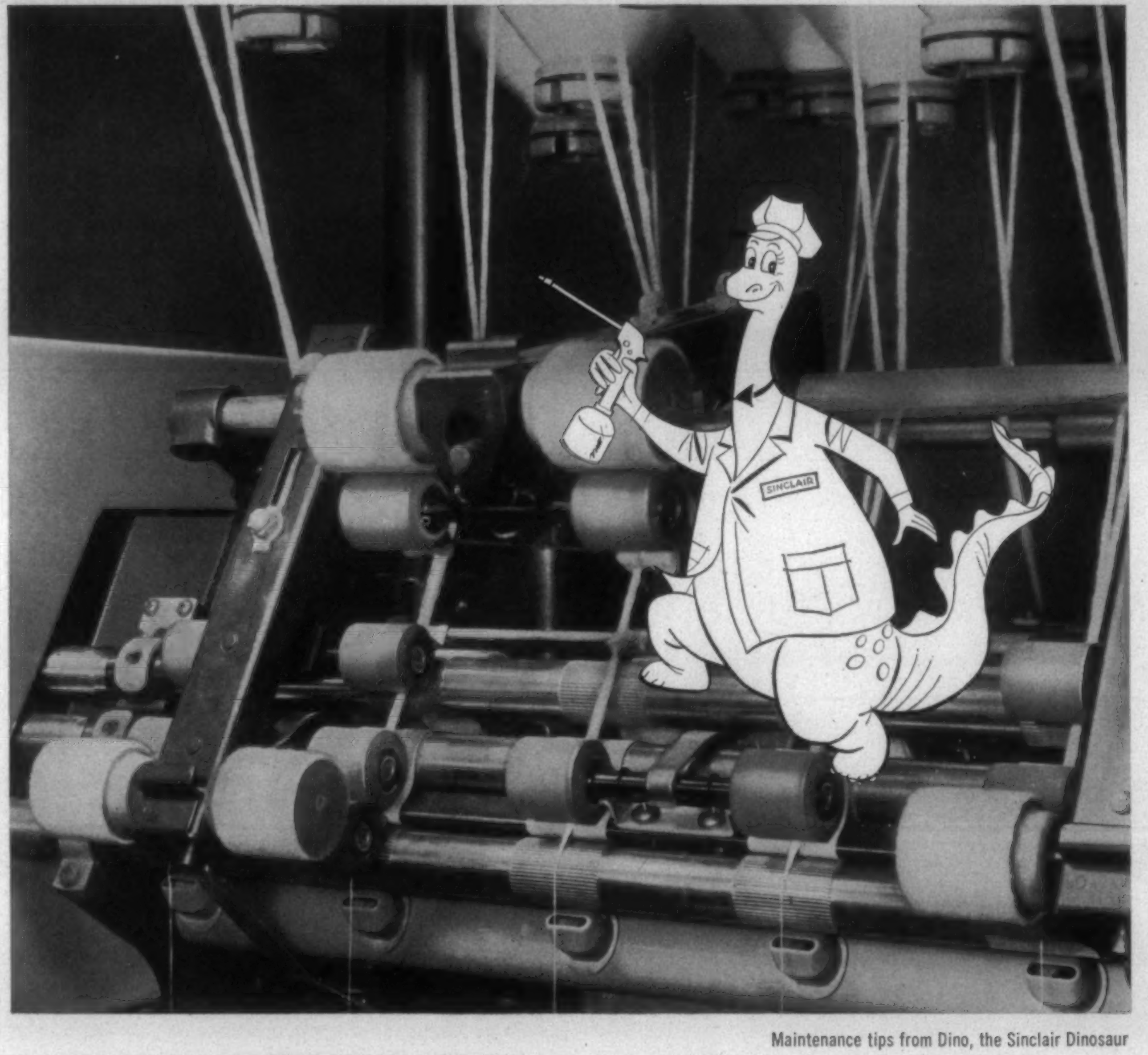
George Meany and his ethical practice practitioners are trying mightily to produce something hygienic among union bosses and in union ways. But it is like slaying dragons, for bosses are two-fisted, and they are not giving up their prize of "autonomy" without a fight. Perhaps with McClellan help, Meany may win. Without it, the bosses are strong enough to snap their fingers, and go the way they have been going.

Meany says that only a few of his 200 unions are scandal-scarred, but the few are big, and splice their way into many more unions. The palship of bosses reaches far, and in devious ways. Expulsion only slams a door and leaves their labyrinth unexplored. What they fear much more is the hardening attitude of public opinion and rebellion of the serfs in their unions. Big stick power cannot be used to quell this uprising, or to stave off legislative action, if the courage of Congress can be screwed up to that point.

The McClellan hearings are proving that big unionism has become a giant, financed with reserves and income well in excess of $30 billion. Its economic power matches that of the greatest corporations, and its political strength in elections is stupendous. Its capital accumulations come to $10 billion a year, and its wage demands churn up inflation in every kitchen and market.

The McClellan Committee believes that the majority of union leaders are honest, at least with their own cash. But the arrogance of the few spreads a cold span of racketeering, thievery and squalid morality across the whole front. Even union members are coming to suspect that big unionism has become too big for its own good. The voices of rank-and-file members are lost; power is in the hands of the few at the top.

Meany and his board have decided on a public relations program, costing $1.2 million, next year to try to win back friends and rub out the splashes of ink. While they lost $840,000 a year in booting out the teamsters, they are going to ask more money from other unions, and possibly levy a per capita publicity tax.



Maintenance tips from Dino, the Sinclair Dinosaur

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Protect your yarn and roll coverings from needless spoilage...switch to Sinclair NO-DRIP lubrication! These outstanding lubricants give complete bearing protection, yet stay put. They won't creep or throw out of bearings—remain fluid—permit rolls to turn easily and smoothly.

Sinclair NO-DRIP Numbers 8, 12, 15 and 17 can save you money through smooth operation and low maintenance costs. Call your Sinclair Representative today, or write for the new NO-DRIP pamphlet to Sinclair Refining Company, Technical Service Division, 600 Fifth Avenue, New York 20, N. Y. *There's no obligation.*

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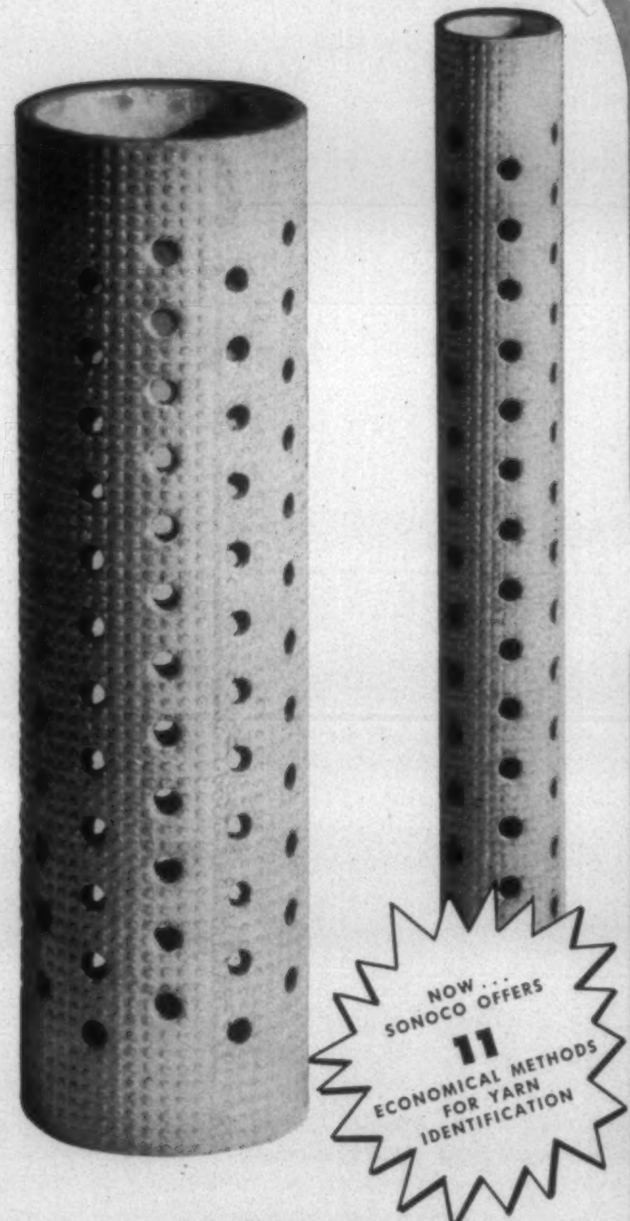

SONOCO expands its line of quality DYTEX tubes with the addition of the DYTEX "L" Tube. This new tube, a product of SONOCO research, has passed critical evaluation by leading mills.

The DYTEX "L" Tube was designed specifically for those who prefer a light colored tube for bleaching and dyeing. It is a sturdy, dependable carrier having all the fine characteristics of the other tubes in SONOCO'S DYTEX line.

SONOCO DYTEX Tubes are now available in base colors of brown, blue, green and tan. For yarn identification, the colored tubes may be used and tubes can be supplied with different color rings on the ends.

For the ideal combination, use SONOCO DYTEX Tubes with Plastavon Sleeves for all your bleaching and dyeing operations. You profit by using SONOCO yarn carriers designed for the job. Order a supply now.

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Vol. 21 November 1957 No. 11

The KNITTER
A Journal for the Manufacturer

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THE KNITTER IS PUBLISHED MONTHLY BY
CLARK PUBLISHING COMPANY
P. O. Box 1225 • CHARLOTTE 1, N. C. • Telephone ED 3-3173
— Offices and Plant: 218 West Morehead Street, Charlotte 6 —
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THE KNITTER is devoted to the dissemination of information and the exchange of opinion relative to all aspects of the knitgoods industry—hosiery, underwear and outerwear—in both the United States and Canada. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors. ¶ THE KNITTER is distributed gratis each month to major officials of all knitting mills in the United States and Canada. To others, the subscription prices are, for one year payable in advance, $2.00 in the United States, $4.00 in Canada and $5.00 elsewhere in the Postal Union; single copies, 25 cents. ¶ A companion monthly technical journal, TEXTILE BULLETIN, serves spinners, weavers, dyers and finishers of yarns and woven fabrics.

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Labor's House Is Crumbling Fast

The year 1957 will go down on the books as the roughest and most crucial the labor union movement has experienced in recent years. It has been exactly a decade since there was anything comparable—the atmosphere following the enactment of the Taft-Hartley Act. On that occasion the unions had just failed to defeat the first successful attempt in many years to restrict rather than to expand labor's prerogatives. The year 1957 has been one of exposure of suspicions long rife of racketeering, corruption and high-handedness in the affairs of several unions, including one of the two textile unions, the United Textile Workers Union.

Despite the moves of George Meany, president of the A.F.L.-C.I.O., and of the A.F.L.-C.I.O. Ethical Practices Committee in an effort to set labor's house straight from within, and the threatened expulsion of tainted unions if they don't "clean up," it has been a bleak year indeed for organized labor as a whole, and it now goes without saying that when the second session of the 85th Congress opens in January, it faces the start of a period of "purifying" legislation to restrict labor's prerogatives.

At the same time, it now seems certain, the nation will be witnessing the opening phases of a long and drawn-out internecine labor warfare. This became apparent, of course, as soon as the teamsters union, with its million and a half members, was suspended by the A.F.L.-C.I.O. Executive Council, and the union's executive board decided flatly to disregard a clean-up order. The truckers union's defiance of the mandate to change its upper echelons points to almost certain expulsion of the union by the full A.F.L.-C.I.O. convention which opens December 5 in Atlantic City.

The war between the A.F.L.-C.I.O. and the giant teamsters union, according to all indications, may be a long cold one instead of a hot one, with the A.F.L.-C.I.O. trying to whittle away the defiant union rather than trying to set up a rival truck drivers union. A nibbling away offensive is viewed as likely because of two main factors: (1) the teamsters have elbowed their way into some corner or other of nearly every important union's jurisdiction; and (2) member unions are going to have to depend on the co-operation of local teamsters just about wherever strikes may occur in most parts of the nation. The teamsters, incidentally, constitute A.F.L.-C.I.O.'s largest unit.

The suspension of the teamsters (expected to become expulsion at the Atlantic City convention) means that the union cannot be accepted back into the federation in good standing unless it completely boots out President-elect James R. Hoffa and meets other A.F.L.-C.I.O. conditions for a clean-up. This the executive board of the powerful union has refused flatly to do, and the truckers, as has been indicated all along, are ready to try it alone. Hoffa, who would succeed Dave Beck as president of the truckers union, and other officials were elected at a defiant Miami convention which Federal District Judge F. Dickinson Letts has ruled was rigged to pick Hoffa. Judge Letts has barred the new officials from taking office until the case, brought by some union members, is tried on its merits.

Hoffa, of course, has a very firm grip on the teamsters union, as was so blatantly demonstrated at the Miami convention, and the whole situation could lead to bitter jurisdictional strikes. These could easily become more violent and destructive than any management-labor disputes. The teamsters, of course, have certain strategic advantages in that they could, if they chose, paralyze the economy by refusing to move goods. Needless to say, such developments most certainly would intensify the "something must be done" attitude on the part of the public which, even as it stands now, promises to bring corrective and repressive legislation in 1958, a Congressional election year.

Late in October and early in November there were moves indicating the United Textile Workers (A.F.L.), another union to which the A.F.L.-C.I.O. high command issued an ultimatum, was trying to avert suspension and expulsion, for fear that its strong rival, the Textile Workers Union of America (C.I.O. formerly), would fatten itself upon its bleeding carcass. Subsequently, within a matter of days, A.F.L.-C.I.O. President Meany announced the beleaguered and anemic textile union has qualified, through its clean-up actions, for continued membership in the federation.

After conferring with seven international officers of U.T.W., Mr. Meany said: "If this board (the seven officers) says it will meet all instructions, we'll trust them. I believe they are still trade unionists." He said the U.T.W. has agreed to hire a new accountant and put in a new accounting system. At the same time the textile union announced that Joseph Jacobs, in accordance with A.F.L.-C.I.O. demands, has been removed as Southern organizer and would be dropped as union counsel.

However, the situation which led to the threatened expulsion revealed a sordid picture of a "financial smorgasbord" at the expense of union members, from which it would certainly seem there can be no early or quick recovery, especially since the revelation came at a time when textile unionism in the South was at its lowest and skimpiest.

The first development came when Loyd Klenert, secretary-treasurer of the U.T.W., resigned under fire. Subsequently, Anthony F. Valente bowed to A.F.L.-C.I.O. pressure, and resigned as U.T.W. president. It will be readily recalled, of course, that hearings of the McClellan Committee produced evidence that Valente and Klenert had used union money toward the purchase of plush homes, a grand piano, a color TV set, over $2,500 tickets to "My Fair Lady," the Broadway hit, as well as even brassieres, trampoline lessons and a $25 corkscrew.

Call the Southern textile worker what you will—satisfied, independent or individualistic—he has by and large been dubious about having outsiders influence his relations with management and has tended to shy away from the unions' wooing. The high living—with the aid of union funds—by Klenert and Valente must have been sickening to union members who had looked for the U.T.W. to help improve their lot. It must have been very sickening also to union members to learn that when Klenert resigned under fire there was a severance pay arrangement involving $104,000 —$100 a week for 20 years. This the A.F.L.-C.I.O. ordered the union to agree to cancel as a condition to remaining in the federation.

The apparent unconcern of Klenert and Valente when confronted with the McClellan Committee's evidence must also certainly have disturbed the rank and file union member. There was testimony that when some of the financial shenanigans were discovered, the union leaders scurried around to repay the misspent money, even making attempts to borrow cash from employers with whom the union bargains. And apparently the two union officials saw nothing particularly wrong with their actions.

Following the resignation of Mr. Klenert and subse-

TEXTILE INDUSTRY SCHEDULE

— 1957 —

Dec. 4 (W)—**A.A.T.T.**, Della Robbia Room, Vanderbilt Hotel, New York City.

Dec. 7 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Dinkler Plaza Hotel, Atlanta, Ga.

— 1958 —

*Jan. 8 (W)—**A.A.T.T.**, Della Robbia Room, Vanderbilt Hotel, New York City.

*Jan. 11 (Sa)—Board of Governors meeting, **SOUTHERN TEXTILE ASSOCIATION**, The City Club, Charlotte, N. C.

Jan. 13-14 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL**, Hotel Westward Ho, Phoenix, Ariz.

Jan. 30-Feb. 1 (Th-Sa)—Annual conference, **TEXTILE DIVISION, AMERICAN SOCIETY FOR QUALITY CONTROL**, Clemson House, Clemson, S. C.

*Feb. 5 (W)—**A.A.T.T.**, Della Robbia Room, Vanderbilt Hotel, New York City.

*Mar. 5 (W)—**A.A.T.T.**, Della Robbia Room, Vanderbilt Hotel, New York City.

Mar. 6-7 (Th-F)—Spring meeting, **TEXTILE QUALITY CONTROL ASSOCIATION**, Poinsett Hotel, Greenville, S. C.

*Mar. 13-14 (Th-F)—Spring meeting, **SOUTHERN TEXTILE METHODS AND STANDARDS ASSOCIATION**, The Clemson House, Clemson, S. C.

*Mar. 18-21 (Tu-F)—Spring meeting, **A.S.T.M. COMMITTEE D-13 ON TEXTILES**, Sheraton-Park Hotel, Washington, D. C.

*Apr. 2 (W)—**A.A.T.T.**, Della Robbia Room, Vanderbilt Hotel, New York City.

Apr. 10-12 (Th-Sa)—Annual convention, **AMERICAN COTTON MFRS. INSTITUTE**, Hollywood Beach Hotel, Hollywood, Fla.

*Apr. 11-13 (F-Su)—Spring meeting, **PIEDMONT SECTION, A.A.T.C.C.**, Washington Duke Hotel, Durham, N. C.

Apr. 16-18 (W-F)—Annual meeting, **ALABAMA TEXTILE MANUFACTURERS ASSOCIATION**, Hotel Buena Vista, Biloxi, Miss.

Apr. 23-26 (W-Sa)—Annual meeting, **COTTON MANUFACTURERS ASSOCIATION OF GEORGIA**, Boca Raton Hotel, Boca Raton, Fla.

Apr. 24-26 (Th-Sa)—Annual convention, **PHI PSI TEXTILE FRATERNITY**, Philadelphia, Pa.

Apr. 30-May 1 (W-Th)—Spring meeting, **THE FIBER SOCIETY**, The Clemson House, Clemson, S. C.

*May 3 (Sa)—Spring meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES**, Thach Auditorium, Alabama Polytechnic Institute, Auburn, Ala.

*May 7 (W)—**A.A.T.T.**, Della Robbia Room, Vanderbilt Hotel, New York City.

May 19-24 (M-Sa)—**NATIONAL COTTON WEEK**, sponsored by the National Cotton Council of America.

May 26-29 (M-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION** (sponsored by American Management Assn.), New York Coliseum, New York City.

*June 4 (W)—**A.A.T.T.**, Della Robbia Room, Vanderbilt Hotel, New York City.

June 19-21 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN.**, The Grove Park, Asheville, N. C.

June 22-27 (Su-F)—61st annual meeting, **AMERICAN SOCIETY FOR TESTING MATERIALS**, Hotel Statler, Boston, Mass.

*Sept. 10-11 (W-Th)—Fall meeting, **THE FIBER SOCIETY**, Montreal, Canada.

*Sept. 11-12 (Th-F)—Annual meeting, **COMBED YARN SPINNERS ASSOCIATION**, The Cloister, Sea Island, Ga.

Sept. 19-20 (F-Sa)—Fall meeting, **TEXTILE QUALITY CONTROL ASSOCIATION**, Hotel Barringer, Charlotte, N. C.

*Oct. 1-2 (W-Th)—Seventh annual **CHEMICAL FINISHING CONFERENCE** (sponsored by the National Cotton Council), Washington, D. C.

Oct. 6-10 (M-F)—**SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

*Oct. 14-17 (Tu-F)—Fall meeting, **A.S.T.M. COMMITTEE D-13 ON TEXTILES**, Sheraton-McAlpin Hotel, New York City.

*Oct. 25 (Sa)—Fall meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES**, Thach Auditorium, Alabama Polytechnic Institute, Auburn, Ala.

Oct. 30-Nov. 1 (Th-Sa)—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS**, Conrad Hilton Hotel, Chicago, Ill.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday

****Listed for the first time this month.*** ***‡Tentative listing.*** ***†Changed or corrected from previous issue.***

quently that of Mr. Valente, reports developed in the South that a revolt was under way among the membership unless Joseph Jacobs was kicked out also. Then, on November 7, the union announced the removal of Mr. Jacobs as Southern organizer and said he would be removed also as union counsel.

No one, of course, can accurately forecast any developments which may lie immediately ahead, but these swift developments apparently ended the incipient threat of any appreciable migration of rank and file members to the T.W.U.A. This had been rather doubtful anyway, since the abortive and disastrous strike which the T.W.U.A. conducted in the Spring of 1951 is still fresh in memory. Incidentally, when this strike ended in defeat of the union, Valente himself was one of the T.W.U.A. leaders who took his followers out of the C.I.O. union.

Certainly there has never been any love lost between the two rival textile unions, but it would appear most ironic if now the disquieted U.T.W. members flocked back into a C.I.O. union from which many of them left in disgust a mere six years ago. For the relatively few Southern textile workers who have fallen victim to outsiders' promises and blandishments, it must be a rather sorry picture anyway they might choose to view it.

On the one hand, the affairs of the U.T.W. have become a national scandal. The T.W.U.A., originally C.I.O. but now also holding a charter from the combined A.F.L.-C.I.O., is the stronger of the two unmerged unions. Yet its highly-touted organization drive in Dixie a little over a year ago has failed miserably, and one development after another, including the views of the union top brass on the racial segregation question, have combined to stop the union movement in its tracks in the South. Nevertheless the T.W.U.A. continues to fight a somewhat rear-guard action to keep alive or afloat in the precarious situation in which it has found itself. Currently it is concentrating on Gaston County in North Carolina, where only about 1,000 of the county's 39,000 textile workers are organized.

But the T.W.U.A. has been meeting with one rebuff after another, and the biggest one came this Fall when it decided to call off its intensive five-state campaign to organize Burlington Industries. For months, unsuccessfully, the T.W.U.A. sought desperately to drive a wedge between Burlington management and employees, and then it announced it was giving up the campaign and withdrawing all petitions. Actually, the organizational campaign against Burlington extended in its entirety over a 20-month period with about 25 organizers active in the drive. In only two plants, at Galax and Hurt, Va., were union elections actually called. The T.W.U. A. lost both.

The attempted house-cleaning on the part of the A.F.L.-C.I.O. high command, whatever it may lead to otherwise, is certainly going to result in more union squabbling than the country has ever seen before. As for the rival textile unions, they agreed in 1954, when the A.F.L. and the C.I.O. merged and both joined the super-organization, that they would not raid each other. However, developments in recent weeks have tended to bring into the open and to the surface what everyone has known all along, that between the U.T.W. and the T.W.U.A. it's still pretty much a matter of "dog eat dog."

The competition between the two textile unions still exists. That much is very obvious. The U.T.W. and the T.W.U.A. have been given until the end of this year to

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become one union under a single charter from the A.F.L.-C.I.O. There has been, over the months, little indication that any progress toward a merger was being made, and, to put it rather mildly, the current situation has not tended to clarify this basic issue.

The textile union factionalism is a rather complex picture, with many ramifications of competition. U.T.W. was, of course, the original textile union within the framework of the old A.F.L. When John L. Lewis pulled out of the A.F.L. and helped form the C.I.O., the C.I.O. thereupon chartered T.W.U.A. Subsequently T.W.U.A. began chipping away at the membership of its rival and U.T.W. suffered. In due course, however, leaders of the C.I.O. textile union fell out among themselves and the chief organizer, George Baldanzi, pulled out and went over to the U.T.W. camp, taking with him quite a few members and a considerable amount of money held in local union accounts. Later, Baldanzi got out of the textile union movement altogether, presumably because he couldn't get along with U.T.W. officials. It all rather adds up to the fact that in recent years raids on each other's membership have about cancelled out each union's organizing efforts.

The outcome of the announced determination of A.F.L.-C.I.O. President Tom Meany and other top leaders to set labor's house in order from within is something which, by and large, remains to be seen. It is very obvious that the McClellan Committee feels that a great deal of corrective legislation will be needed in any event, and a section of the committee's big staff is now working full time behind closed doors on tentative legislative proposals. The A.F.L.-C.I.O. high command has been invited, and has agreed, to submit its proposals to the committee for legislation to curb labor corruption. In this, as in other spheres, it can be regarded as almost inevitable that there will be a collision of viewpoints.

The McClellan Committee's present plan is reported to be to forward an interim report to the Senate shortly after Congress reconvenes in January. There have been reports that the committee plans to aim its first recommendations at corrections of specific abuses which have been pointed up at its public hearings. Obviously, of course, one of the committee's first problems will be to decide which areas are subject to Federal legislation and which can best be left to state labor laws or regulations under the A.F.L.-C.I.O. Ethical Practices Committee.

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Disclosures of union officials' betrayal of the trust reposed in them by union membership, of course, has raised not only the question of new legislation but also that of protections afforded by laws now on the books. The Taft-Hartley Act is concerned principally with creating and maintaining equality of bargaining power between management and labor. Nevertheless it contains some safeguards to the rights of individual union members. For instance, unions must file with the Secretary of Labor current financial reports, regulations as to membership, disbursement of funds, and procedures for discipline.

In some quarters it has been suggested that what is flagrantly missing in existing legislation is some minimum of supervision to make sure that what the union says is so is really so, and what they say they do is actually done. In this connection, it has been suggested that a workable solution might be the establishment of administrative authority to back up such supervision on appeal of union members who may feel that their rights are infringed.

Whether or not all the basic and controversial issues involving labor are decided in a Congressional election year, it virtually goes without saying that legislative reform lies ahead. Suggested reforms are many, involving proposals such as placing the unions under the anti-trust laws, and adoption of a Federal right-to-work law, modeled after the right-to-work laws already on the books in 18 of the states. The unions, of course, can be expected to fight any such proposals, including much milder ones that have sparked less controversy. The "go to hell" attitude of the teamsters union, however, has certainly tended to bring about greater public recognition of the fact that the power of such an organization, which can paralyze an entire industry or industries simply by mere refusal to work, most certainly must be curbed.

The abuse of the right of "organizational picketing" has stood out most glaringly in the McClellan Committee's expose of the teamsters. The teamsters, for instance, can post an "organizational picket" outside the premises of an employer, stopping truck deliveries, and the employer is quickly brought to his knees. This pays off with a collusive contract that puts his workers into a union and checks off their dues without even consultation with the new union "members."

It has become increasingly obvious that concentration of power in the hands of a few labor leaders, if allowed to continue, can become a grave danger to the nation. The labor unions at present enjoy too much immunity from the law. The cornerstone upon which union monopoly rests is compulsion. And it is monopoly power and compulsion that have been the means by which crooks, racketeers, gangsters and hoodlums have maintained themselves at the top of some unions. But the days of union immunity from control are apparently now numbered, and an inevitable reckoning lies ahead.

Senator McClellan has declared that the rank and file of labor must be protected "from gangsterism and racketeer control." There is growing recognition and demand that so much power over the nation's economy cannot be left in the unrestricted hands of a labor boss such as Hoffa. The outlook is certainly stronger than ever for Congressional action to hold labor to a stricter public accountability, and just how far the legislative pendulum is now going to swing undoubtedly must be causing labor union brass and their friends some sleepless nights.

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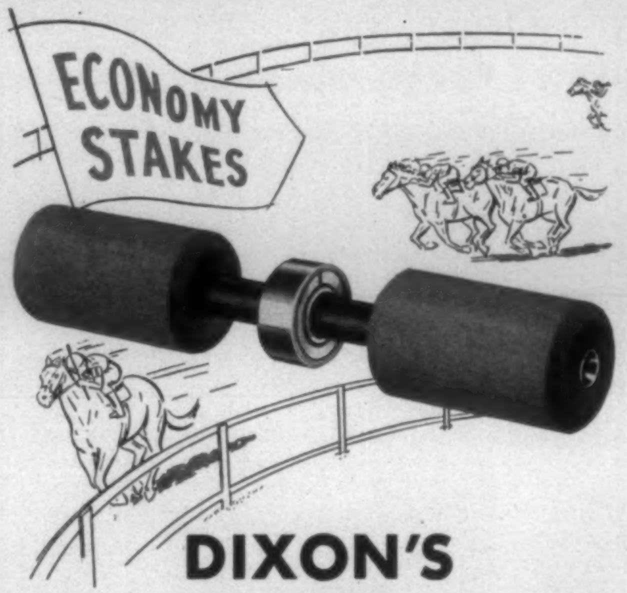

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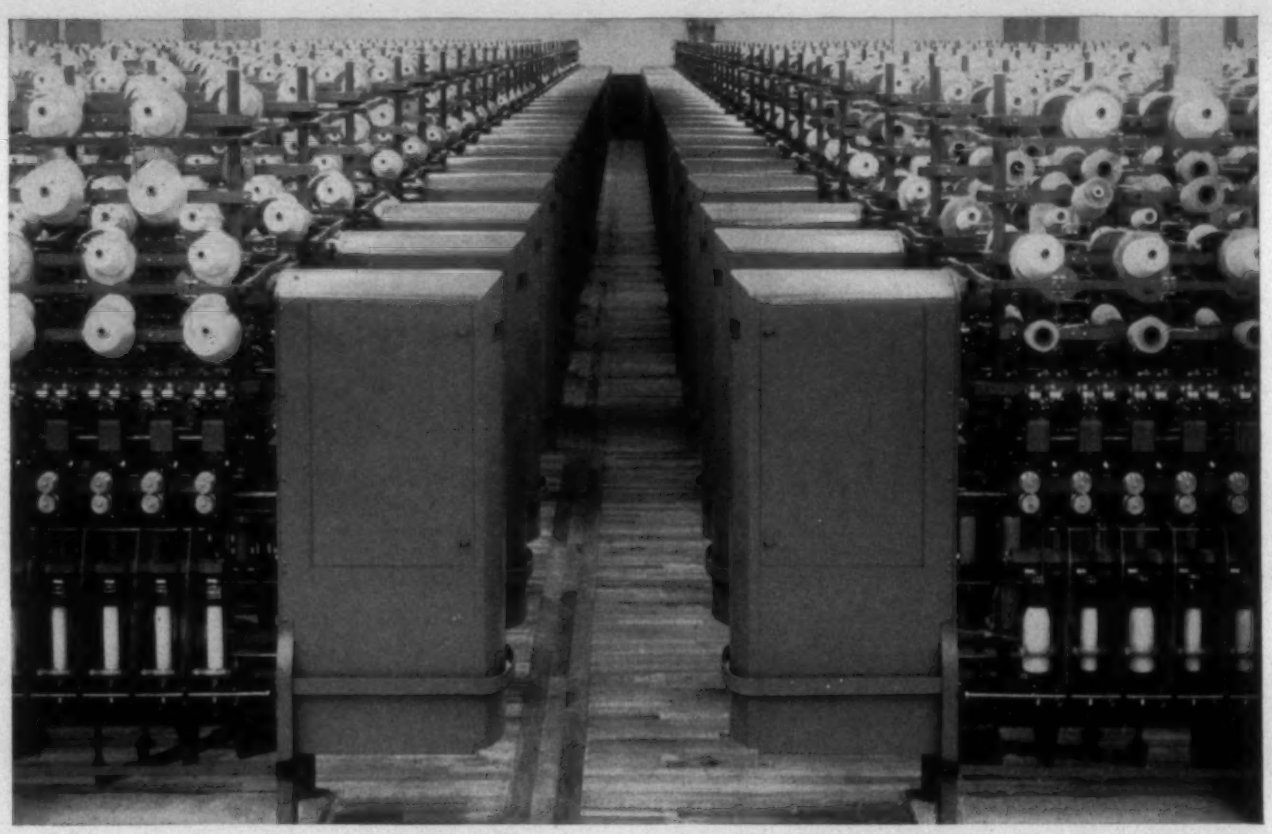

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textile bulletin

VOL. 83 NOVEMBER 1957 NO. 11

A Special Study

YARN TENSION

And Its Problems

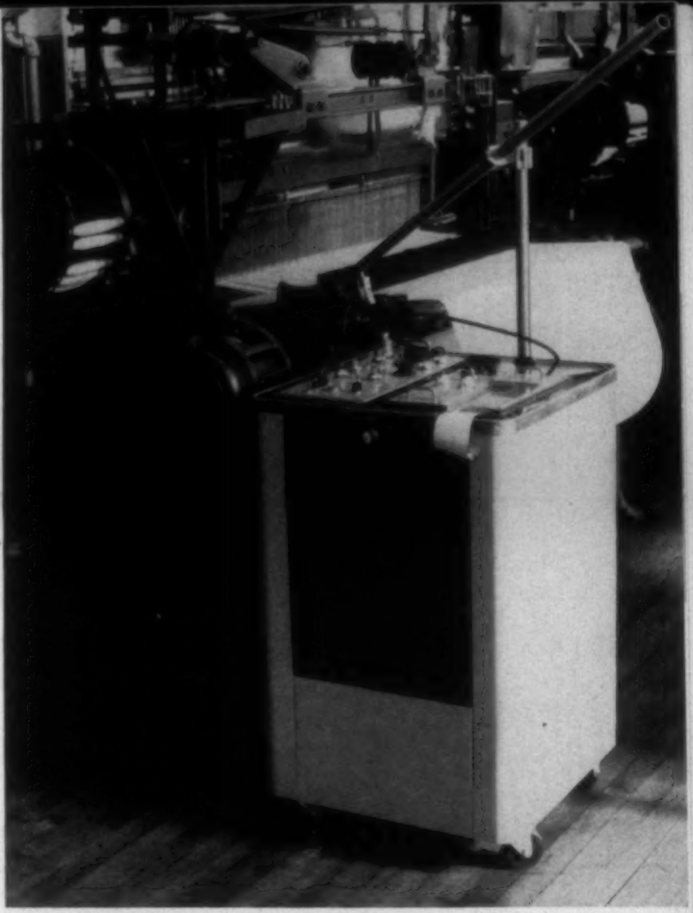
INTRODUCTION

By JAMES R. WRIGHT, Product Engineer
Uster Corp., Charlotte, N. C.

Proper tension has long been a hit-or-miss proposition—with human judgment being the basis for selection. This introductory article is the first of a series concerning tension and problems attendant to it. The series will attempt to take guesswork out of tension control and make it an exact science.

The study on which the series is based has been undertaken as a means of compiling known information on the subject plus additional data determined through extensive field studies. Specific faults in tensions will be explained and illustrated graphically. The effects of these faults and methods for correction will also be covered.

Forthcoming articles will deal with tension problems in roving, spinning, winding, spooling, slashing and weaving. A careful study of this information is encouraged, since it is felt that the science of tension and tension control may have an impact on the textile industry as great as the electronic testing of evenness.



The Uster Custom Tension Recordograph with boom attachment is shown here set up to determine the tension on a warp mounted on a loom.

THE Uster Custom Tension Recordograph is a complete unit for accurate measurement and proper regulation of yarn tension, capable of recording pertinent data on easily read charts. By simple adaptation, the instrument may also be used successfully on any flexible type of strand or ribbon stock of varied compositions in instances where tension measurement is desired.

The Recordograph is successfully fulfilling a vital need of the textile industry especially where the appearance of finished fabric is of basic importance. Fabric appearance is markedly affected by the amount of tension applied in spinning, winding, warping, slashing, weaving, knitting and other processing. The instrument will also measure and record elongation characteristics of sliver, roving, yarn, and other materials with breaking strength in the range covered. Its application is equally effective in the study of tension variations in fine flexible wire or to the study of surfaces in contact with a running yarn or wire system. Small bearings can also be introduced into the system, resulting in tension variation pattern characteristics of the mechanical parts of the bearing.

Standards Of Tension

There has never been, to date, any set point which could be called "average tension"—at least, not in the sense that machines could be properly set in accordance with standards prescribed for various types of materials run. Only through the accurate information, such as that indicated on the Recordograph charts, can average tensions and settings be determined with the necessary accuracy. Hand tension devices which are not equipped with means of actual recording have been used. To a greater or lesser degree, they have failed to offer the desired degree of efficiency. With the Recordograph chart, the recorded grams in tension are actually shown and troubles may be more easily identified and corrected.

When tension exceeds the minimum it weakens the yarn causing ends down in spinning and other processes which affect the grade of quality. Not only are labor costs increased but also percentages of production are lowered. This causes a rise in waste cost as well as increases the amount of cleaning required.

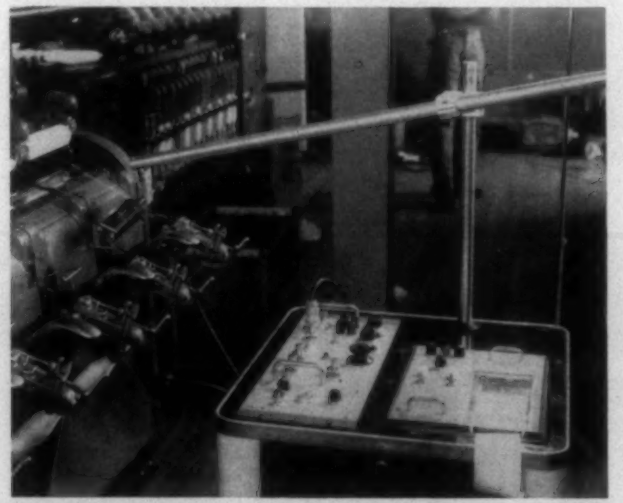
Elongation Characteristics

The processes of slashing, warping, weaving and knitting all necessitate good and uniform elongation characteristics in sliver, roving and spinning. These are essential to uniform drafting. The Recordograph offers a ready means of study of the characteristics of fibers and materials such as plastic, wire, ribbon and others.

Costs can be greatly reduced through the use of Recordograph charts. As an example, in the spinning and twisting room, the Recordograph will indicate the following faults: (1) spindle out of plumb; (2) thread guides out of plumb; (3) ring diameter too large for yarn size; (4) ring diameter too large for gauge of frame; (5) bad or worn rings; (6) traveler circle too high or too low; (7) wrong ring flange size; (8) variation in spindle speed; and (9) traverse too long without balloon control.

These faults can, and will result in: (1) tight and loose stitches in knitting; (2) tension must be set on knitting, shuttle, warps, winder and sewing machines for the average elongation; (3) too much variation in elongation will mean that tension will be too great or too small at various times; and (4) variations in elongation are of the utmost importance where tension settings are required. In short, the quality of the finished fabric is all tied in with tension patterns. Intelligent use of the Recordograph will help the department avoid the necessity of a complete overhauling job as well as lessening the possibility of ends down.

The Uster tension testing device offers additional benefits in savings by affording improved standards of setting up other types of machinery for new yarn and styles. In addition the instrument aids in adjustment of setting machine guide and tension devices and in the selection of different materials for guide, travelers, rings and other similar components such as the waxes, oil and slasher mixes. Selection can be made with more certainty based on the measurements recorded rather than by the costly trial-and-error method.



The tension testing device is shown in position for determination of tension on a winder. The measuring head is held at the end of the boom. Note the position of the graph paper as it comes from the tester.

Influencing Factors

Many variable factors influence tension requirements especially in the production of sliver and roving. A few such variables are the character of the stock, the thoroughness of mix, and temperature and humidity variations. Mechanical variables which influence proper tension include the age and make of cone belts used, proper adjustment of cone belt for proper tension in start-up on empty bobbin, amount of pressure exerted by flyer presser, speed of frame, amount of twist, worn bobbin and spindle gear, worn step, spindle, and bolsters, and worn flyer and presser.

If all these variables can be determined, as well as the influence of each weight, then perhaps a reasonably accurate constant might be derived. Continued research is needed, and is being done, to secure a more scientific knowledge of the tension requirement.

As the situation stands now, the adjustment of tension on a roving frame is a matter of trial and error. A satisfactory tension is difficult to achieve and, at the same time, it is extremely important. Gross errors in tension are readily detected. Slack tension can be recognized and tight tension causes the roving to break. The greatest harm comes from lack of preciseness in tension adjustment, such as increasing the tension slightly more than it should be. The roving does not break under the small excess but the fibers passing each other are pulled at the lightest spots, thus making thin places in the roving and greatly decreasing its quality. This damage is not readily detected unless it is being carefully and regularly tested.

Importance Of Tension Control

In the past, many mill men have had nothing but their hands or fingers with which to check for the correct amount of tension to be run on roving, yarn and fabrics. For example, a card room overseer would press his fingers between two strands of roving and say whether or not the tension on the yarn was correct. Many times he has probably changed tension or cone gears when it should not have been done. Or, other supervisors in the card room would probably say the roving yarns should have a certain amount of bounce from start of the doff to the finish. Also, in this manner, the weave room overseer would do the same by pressing his hand against the warp ends. This practice has sufficed in past years in the textile industry but in today's highly competitive markets the textile manufacturer cannot afford to have any slip-ups. By using the hand and feel method and human sensitiveness, a greater range in differences in the amount of tension in the manufacture of yarns and fabrics is developed.

For every type fiber and fabric there is a best-suited tension, which will result in the desired effect in the finished product. Theoretically, if the material were constant in weight and uniformity the tensions would be constant but, of course, it is impossible to keep a constant tension, due to variations in the materials, in the drafting

MAXIMUM PRODUCTION DEMANDS PRECISION TENSION CONTROL

The facts are in. The Uster Custom Tension Recordograph has proved the most critical factor in production speed is tension adjustment.

Developed by the Celanese Corporation of America to perform effectively on the production floor, the Uster Custom Tension Recordograph is built for heavy duty use, is easily operated by any qualified mill personnel and opens the door to major operating economies.

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cycles, and winding the yarn from one package to another. In addition, tension variations are caused by the rapid changes in direction and motions of each machine.

Now, with the introduction of new fibers and new fabric styles, improved machinery with higher speeds and a demand for decrease in doublings as well as for higher and better quality at lower prices, it has become necessary to control tensions within a precise tolerance. Mill men and textile manufacturers are well aware of the fact that uncontrolled tensions will result in a high non-uniformity in yarns, rovings and slivers. This, in turn, causes more ends down in the spinning process, causing the yarn to have a poor breaking strength which results in low production in the processes of spooling, warping, winding, slashing and weaving.

Outstanding Defects

There are many quality defects caused by uncontrolled tensions. Some of the most outstanding defects are filling bands, wavy cloth, slack selvages, set-marks, broken picks, kinky filling, warp streaks, uneven package dyeing and poor appearances.

The amount of tension on any fiber or fabric can also be determined, to a great extent, by the amount of waste in the processing. A poor tension control in the spinning, winding, warping and slashing departments may result in a large amount of very expensive yarn being transformed into waste. For instance, on a slasher one beam or more can have an excessive amount of tension on it which will cause as much as from 40 to 100 yards of yarn that is waste which cannot be salvaged at this stage. With the Recordograph, every beam can have the same amount of tension thereby eliminating this amount of waste due to improper tensions probably in the warping or in the uncontrolled tension area in slashing.

In almost every case, tension control can contribute greatly to attaining and maintaining a favorable breaking strength and elongation of yarns, correct yardage per package for maximum production and correct yardage per pound in the cloth. There are a number of new tension devices on the market which tend to reduce the variations in tensions and approach the optimum tensions. However, these developments have not offered much change or advance in the past several years.

Prior to the hand tension device available to the average mill, all mechanical instruments were designed to balance the tension against a calibrated spring. These instruments are low in accuracy and high in inertia. At their very best, they indicate only the average of rapidly fluctuating tensions. The hand tension devices are all of the direct reading type and it is difficult to obtain an accurate pattern and to study the causes and results of varying tensions. Even with these limitations the hand tension devices have been extremely useful in the detection and correction of troubles resulting from incorrect tensions.

With the introduction of the new Uster Custom Tension Recordograph, the door is open to a completely new science of tension measurement and control. With the Recordograph, the tension occurring on any ribbon or strand of material running at production speed can be measured and recorded and the action of any moving part can be indicated instantly at the time the event occurs.

Cotton Fiber's Protective Coating

NEW information on the physical and chemical nature of the outer membrane of the cotton fiber and the effects on it of such commercial processes as scouring, bleaching and mercerization has been developed in U. S. Department of Agriculture research. This new basic knowledge serves as a guide for processors to the most efficient existing treatments for enhancing particular natural properties of cotton, and it should point the way also to development of new and improved treating methods.

The cotton fiber is essentially a collapsed and flattened tube—a single biological cell—consisting of an inner and outer wall. The behavior of individual cotton fibers in the fabrication and chemical finishing of cotton textiles is influenced by the nature of its primary wall, the thin outer membrane which covers its entire surface. Since this surface comes into immediate contact with manufacturing treatments, the primary wall is significantly involved in frictional effects, wetting, dyeing and similar operations.

To determine the properties of the outer wall, U.S.D.A.'s Southern Utilization Research and Development Division has perfected a technique to loosen and strip the wall from the rest of the fiber and to distinguish it from other fiber fragments under the microscope. This technique permits, for the first time, the collection of relatively pure samples of isolated primary wall for chemical analysis and microscopical examination.

Chemically, the primary wall is approximately 50 per cent cellulose. Most of the remainder consists of wax, pectic substances and nitrogenous material. Traces of mineral matter and cutin also occur. An important fact is that in terms of the chemical composition of the whole fiber the non-cellulosic substances are highly concentrated in the outer wall. To a large extent these non-cellulosic materials influence the spinnability of the fiber in the first stages of textile manufacture.

Removal of the non-cellulosic material in the outer wall and elsewhere in the cotton fiber is the target of such treatments as alkaline scouring and bleaching, which are used to obtain improved whiteness and absorbency. Length of time of scouring, rather than concentration of alkali, is a predominant factor in the removal of non-cellulosic substances. Bleaching, especially with peroxide, removes the last residue of non-cellulosic materials. Furthermore, mercerization of cotton with 20 per cent sodium-hydroxide solution brings about significant changes in the dimensions of the whole fiber but these changes are even more pronounced in the primary wall itself.

Microscopical observations reveal that the primary wall will shrink as much as 40 per cent in the lengthwise direction and 60 per cent in the crosswise direction if the non-cellulosic substances are removed. If they are not removed, shrinkage is much less, only three per cent lengthwise and 30 per cent crosswise. These observations help to account for the changes in shape and cross-sectional area of cotton fibers that occur as a result of mercerization. Fundamental information gained in this study is highly important in providing a better understanding of the properties of cotton and in guiding commercial practices toward full purification of the fiber without loss of its useful textile properties.

GREENWOOD MILLS

The Story Of Two Generations

By HAZEL TROTTER

The late James C. Self always maintained that "Good cotton, good equipment, good organization . . . that's the secret of success."

According to the old saw, if you build a better mousetrap the world will beat a path to your door. Few paths are being beaten toward textile mill doors these days, but there are some well-worn ones here and there. One of the broadest leads to Greenwood County in South Carolina where Greenwood Mills down through the years has made quality as essential an ingredient in its fabrics as yarn. The company employs some 5,000 people, and operates 213,000 spindles and 5,800 looms.

WHEN James C. Self, the elder, died on July 21, 1955, in the $3,500,000 hospital he had erected and given to the people of his Greenwood, S. C., community, he left as fine a group of textile properties as had ever been built by any man. In addition, he bequeathed to his successors a philosophy of management that had proved singularly successful in his own case—a combination of the copy book virtues applied to modern business practices with a generous leavening of the Golden Rule.

For 47 years he had been the sole proprietor of Greenwood Mills, the architect and engineer of its destiny and development. At his death at the age of 79 many in the world of textiles wondered if the policies he had carefully adhered to would be continued by those who came after him. If anyone expected even a mild revolution in management of this company, he has had two years in which to get used to the fact that Greenwood Mills is unchanged.

Jim, Mr. Self's only child, quietly took over the title of president, the job he had been trained for since almost infancy, and J. B. Harris just as quietly stepped up from executive vice-president to chairman of the board. The transition was that simple. And it is significant that it never occurred to anyone to move into the office so long occupied by Mr. Self. It is also significant that after a decent interval the office was turned into a conference room for executives' use, restoring it to its original place as a room for making policy decisions, just as it had been from the time the elder Mr. Self first occupied it.

The golden oak roll top desk at which Mr. Self worked still is in the same corner. The table he once kept piled high with reports, magazines, blueprints, books—and anything else he wanted closer to hand than the general files—has been supplanted by a conference table large enough to accommodate the executive personnel of the two generations, which together now operate the company.

Gathered around the table, the group represents the

The story of Greenwood Mills is synonymous with the story of the Selfs and the Harrises. Two generations are shown in this picture taken in 1948: *(left to right)* James C. Self Jr., John B. Harris Jr., the late James C. Self and J. B. Harris Sr.

The warm relationship that existed between the late Mr. Self and the senior Mr. Harris is mirrored in their sons, the junior Messrs. Self and Harris, now president and vive-president, respectively, of Greenwood Mills.

major activities of Greenwood Mills, which has always been informal in methods of organization. Too, there is a nicety of balance between age and youth—between the first and the second generations of management.

The second generation consists of President James C. Self, who has dropped the "junior" since his father's death; Vice-President John B. Harris Jr., son of the board chairman; Cecil Browning, an assistant vice-president; and C. D. Blalock, the comptroller. The first generation—the generation of the founder—counts Mr. Harris Sr., with the company 44 years; Treasurer L. B. Adams, 34 years; Vice-President J. F. Chalmers, 30 years; and Secretary H. W. Brinson, 30 years.

Mr. Adams was associated with the late Mr. Self prior to joining the Greenwood Mills in 1922. He was made assistant secretary in 1924, secretary in 1926, and treasurer in 1955. He handles real estate and insurance, all cotton purchasing and financing. Vice-President Chalmers, who is in charge of all manufacturing, came up through the ranks as loom fixer, second hand, weave room overseer, and plant superintendent at the Greenwood and Mathews Plants. He was made general superintendent in 1940 and vice-president in 1955.

The younger Harris, President Self and Browning are in their thirties. Blalock has been with the company nearly ten years. Browning qualifies as a second generation official in that his father was a long-time overseer in the Greenwood Plant. He retired in 1950 after a service of 40 years.

Jim Self, Harris and Browning grew up in the mills, working first during Summer vacations. All three were in the Army in World War II. Harris and Browning were graduated from Clemson's Textile School. Self studied business administration at The Citadel at Charleston, served in the Coast Artillery for 4½ years, part of which was duty in the South Pacific theater. Harris spent three years in the Quartermaster Corps, European Theater of Operations. Browning was in the First Armored Division and was wounded in North Africa. He was invalided home and discharged. The oldest of the three, he went to work figuring costs for the senior Mr. Harris after graduating at Clemson in 1937. He also was back on his job earlier than they since he served in the Army only 15 months. It's a matter of some good natured raillery on the golf course that both John Harris and Jim Self worked under him during college vacations.

As long as Mr. Self was alive major policy decisions were made by him and Mr. Harris. So long had they worked together—Mr. Harris came with the company in 1913—each knew what the other was thinking. This does not mean that the president and his executive vice-president moved in a rarified atmosphere insulated from the rest of the organization, but that when it came time to act either in manufacturing or in expansion, they acted. Their relationship was such that each could, and often did, serve as the other's *alter ego*. Or as Jim Self recalled a few days ago, "Any time I ever needed to ask my father about something and couldn't find him, I could ask Mr. Harris and get the same answer my father would have given me." Somehow you get the feeling this still holds true.

Asked what changes had been made in Greenwood Mills operations since his father's death, he looked thoughtful for a moment and then said seriously, "Frankly, I can't think of any. Of course, more people are having to look after more things than they did when Daddy was with us, but so far as I can see, outside of the inspiration of his leadership, the layman could tell no difference in our company."

Time, of course, has brought some changes in day-to-day procedure. Each morning, for instance, the board chairman presides very informally at a conference in his office. Here the executive group discusses any subject that should be considered—personnel, manufacturing problems, new fabrics, and any other matter of interest. While the officials have their own jobs and no one steps on anybody else's toes, each of the men really has a number of jobs. Sometimes these duties overlap, but each man always knows what the others are doing and all work together for the good of the company.

The management group in Greenwood Mills has never increased in proportion to the company's growth. It has not been necessary. From the beginning, those at the top have been men of amazing capacity, sagacity, stamina and aggressiveness. Since they themselves operated in every area, they expected the same kind of performance from their subordinates.

The growth of the company has been steady and rarely spectacular. Even now its executives are inclined to say with becoming if inaccurate modesty, "We are a small company." This depends upon the standard of comparison. Greenwood is small if compared to, say Burlington Industries or J. P. Stevens & Co., with whose products it competes. Yet in a state which in 1956 had more active spindles than any other, Greenwood accounted for about five per cent of the total. Its estimated $15 million annual payroll is Greenwood County's largest, and its Mathews Plant is the largest rayon mill under one roof in the world.

Its payroll also contributes in a great measure to "firsts" such as these. Greenwood County (1) has the highest per capita income in South Carolina; (2) the highest average family income in the U. S.; and (3) more people employed in manufacturing in proportion to total population than any other county in South Carolina.

These are cited to show in a measure the importance of Greenwood Mills to the economy of its section. The company—and that means the management since it is a private corporation—has always concerned itself less with size than it has with quality. To the founder, "quality" meant nothing less than the best. As he liked to explain to reporters who called on him, "You have to start with the best cotton you can buy, the finest machinery made, and the best people there are to operate this equipment. This gives you

In the Fall of 1953, Greenwood Mills began operations in its Durst Plant—the first completely new cotton print cloth mill to be built in this country since the 1920s. The first several million yards of 80-square print cloth from the plant were sold to Greenwood customers who placed orders without even seeing a sample.

a quality product for which there is always a market. And, of course, the people are more important than anything else."

When Mr. Self talked to visitors or at public gatherings, he made manufacturing sound just that simple. The philosophy of Greenwood Mills management was expressed in other terms in a short history of the company issued some two years before Mr. Self's death: "Greenwood Mills realizes that its success has been possible only by the cooperation and technical knowledge of its employees coupled with management's plans of modernization. The Greenwood Mills reputation, that has been built up over the years, will continue to be enjoyed so long as the best quality of fabrics comes from the looms, management continues to progress by improving working and living conditions, and the relationship between management and employees is continued on its present high level."

This has been called "the Greenwood philosophy." It is a philosophy of manufacturing adhered to as closely today by Chairman Harris, President Self and the other executives as ever it was during the elder Mr. Self's lifetime. It also has been called Greenwood's "success formula." That it proved successful for Greenwood is undenied. But either way it added up to something more than material success. And while the late Mr. Self, Mr. Harris, Jim Self and John Harris Jr. would always be hesitant about giving advice on how other companies should run their business, it is safe to say that Mr. Self believed, and his successors are confident, that this philosophy in practice is the best answer that could be found to the problems of the textile industry.

The Greenwood Mills pattern of operation often has not coincided with that of its competitors, and in many respects it has been an anomaly in the industry, conforming neither to the letter nor the spirit of practices usually considered best.

Its growth has led it into many fields, some of them not strictly a part of manufacturing. At a time when most of the industry was tightening its belt and trying to ride out the depression, Greenwood was expanding and modernizing its equipment. When most manufacturers were getting rid of their mill villages either as unnecessary or as luxuries they could no longer afford, Greenwood Mills was building brick houses for its workers, mowing their lawns, and providing laundry service and garbage collection. And at a time when it was generally conceded impractical to build new textile plants in the face of high construction costs and low prices, Greenwood was in the midst of a $20 million expansion program.

Thousands of words have been written about the brick homes Greenwood built for its workers. Not all of them have been favorable for there are those who consider the mill village at its best an example of paternalism at its worst. But the years have shown that what was first conceived as a sort of experiment in labor relations was in Greenwood's case a sound business venture, tending to stabilize the company's work force and attracting to it the high-class, steady employee. These homes rented until a few years ago for 50 cents a room per week, making a five-room house cost a worker's family a little more than $10 a month. After the Harris Plant was completed, older villages were renovated and the rent raised to $1 a room per week.

Despite the fact that at one time 60 per cent of Greenwood's workers lived in its mill villages, the company has never considered itself in the real estate business. Its extremely low rentals could hardly cover taxes and maintenance. These operations have given rise to many a classic story, one of which Mr. Self cherished particularly and often told. It concerned the employee who "fell out" with his overseer and quit. Monday morning he reported for work as usual with the shamefaced explanation that he couldn't get his wife to leave that "brick house." And officials of the company, Mr. Self included, learned years ago to take in stride telephone calls from tenants complaining that the kitchen drain was stopped up and please wouldn't somebody do something.

The close relationship which exists between Greenwood's management and employees was clearly demonstrated last June 13 at the tenth annual meeting of the Quarter Century Clubs of the five plants. The club members adopted a resolution which was delivered to Board Chairman Harris two days later at the Presentation of Awards Ceremony at Ninety Six. Entitled "An Expression of Appreciation," it resolved that "We, the members of the Quarter Century Club, express our individual appreciation to Greenwood

Greenwood Mills has always taken a keen interest in its company homes, which compare favorably with any in Greenwood County. Here the maintenance division is planting rye grass to provide Winter greenery for this village home. Free laundry service is also provided employees.

Mills for all it has done for its employees and for the Community of Greenwood and Ninety Six, and record our gratitude for the pleasure of working over a period of many years with the fine people that manage Greenwood Mills, who are our friends as well as employers." The resolution was signed by club presidents of each of the plants.

The Quarter Century Clubs now have approximately 700 members. The company's annual labor turnover is so low as to be practically non-existent. As Jim Self explains: "Most of us were born and raised in the Greenwood area and consider it our home. The mills in this section—both Greenwood and our neighbors—have always seemed to run more than those in some other areas."

Greenwood's record for continuous employment and the fact that it has never made a practice of going outside for supervisory personnel have combined to keep its work force intact. To these factors can be added another: job for job and process for process, its wages are among the highest in the industry.

There is always construction in progress at Greenwood Mills, and it is done by the company's own building and maintenance department. Jim Self says his father was interested in building—he liked it and he did it himself—not because it would save money—it didn't—but because he felt he could get a better job done that way. His interest in building was inherited by his son, who stepped into a large expansion program when he returned from military service and has been building ever since.

The original plant, the Greenwood, was the first to feel the effect of Mr. Self's compulsion to build. Many additions were made to it between 1908 and 1921. The Ninety Six Plant, purchased in 1921, was enlarged in 1928, and the Mathews, bought in 1931, was expanded six years later.

When American industry began to get back on peacetime operations at the end of World War II, Greenwood in 1948 launched a $20 million expansion program "without outside aid," building among other things two new plants and a hospital. The first of these was the Harris Plant, a filament rayon mill, which went into production on March 9, 1950. The plant was named for Mr. Harris "in appreciation of his many years of devoted service to this company and in recognition of his great personal contribution, his noble example and his inspiring leadership.".

The Durst Plant was completed in 1953. It was built for the production of cotton print cloth. Construction began at a time when many of the leaders in the cotton textile industry were firmly convinced that it was economically unfeasible to build new cotton textile plants because of high labor costs, high taxes and low prices. Like the Harris plant, Durst opened on a three-shift basis which has been maintained. It is named for William Lowndes Durst, first president of Greenwood Cotton Mill, which was organized in 1889 and was the parent company of Greenwood Mills.

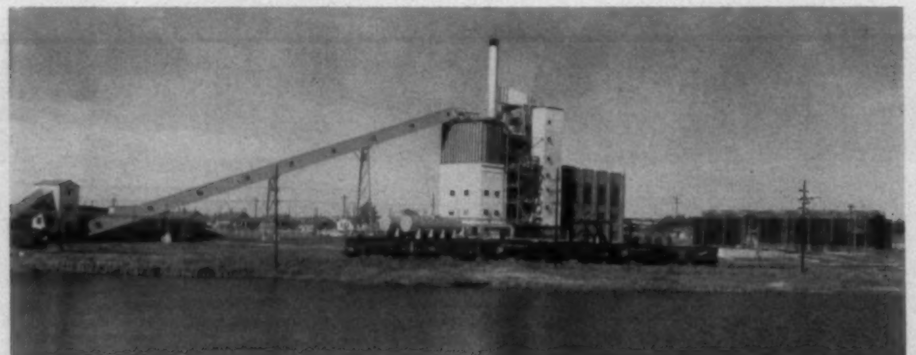
A year after the Harris Plant was in production, the company's construction forces were pushing to completion the Self Memorial Hospital, a five-story, 179-bed institution on the Bailey Military Academy grounds, a gift by Mr. Self to the people of Greenwood, made in memory of his father, a country doctor, and his brother, who was also a physician. At the present, a wing is being added to the hospital. The construction department just recently completed a power plant with 32,500 kilowatt capacity. It is situated between the Durst and the Mathews Plants. The old power plant has been placed on a standby basis.

Besides the print cloth made at Durst and the filament goods produced at Harris, the company makes high quality carded fabrics, shirtings, corduroys and poplins at the Greenwood Plant; combed shirtings, poplins and twills at Ninety Six; and spun synthetics and combed cotton goods at Mathews. Most products are sold in the greige, mostly to converters. At present, the output is divided into 30 per cent synthetics and 70 per cent cotton. Whether the ratio will be changed in the future depends upon demand.

An integral part of the organization is Greenwood Mills Inc., selling agent for Greenwood Mills. Its office is in New York, with a branch in Chicago, and it employs 150 persons. The company also has its own cotton buying division with headquarters in Greenwood and a staff that spends the cotton season traveling "where the product is," seeking the top quality cotton that goes into all Greenwood fabrics.

Greenwood Mills is now approaching its 50th milestone, for it was in 1908 that James C. Self, then a bank cashier, went to the Greenwood Cotton Mill as president. It is unlikely that either the Town of Greenwood or the employees of the company will let this Golden Anniversary pass unnoticed. If Greenwood Mills decides to make of it an occasion, you may be sure whatever is done will be done—as always—in the best of taste.

For some reason, this reporter cannot refrain from recalling something James C. Self Sr. said in an interview two years before his death. As we discussed the new Harris Plant and the then recently-completed Self Memorial Hospital, he said, "I learned a long time ago that you can't take it with you. And I don't think much of a man who makes money in a community and then forgets all about it."



One of the latest projects completed by Greenwood Mills is this new power plant which serves all five of the company's mills.

From **Linear Programming** To **Labor Legislation**

Some Highlights From Last Month's Meeting Of The Southern Textile Methods & Standards Association

This report of the Oct. 10 meeting of the Southern Textile Methods & Standards Association contains information pertaining to linear programming, establishment of standards and a panel discussion. The three-man panel discussed the maintenance of time standards.

IN a Clemson House meeting of the Southern Textile Methods and Standards Association, held Oct. 10th and 11th, an array of speakers were heard on topics ranging from "Linear Programming" to "Labor Legislation." Opening the meeting Thursday, Fred Phillips, president of the group, declined to make any lengthy comments since a conflict with the final game between the New York Yankees and the Milwaukee Braves, settling the most important issue of the day, had delayed the session's starting time.

The meeting was turned over immediately to Bill Kiser, director of standards of Fieldcrest Mills, who introduced Prof. R. W. Llewellyn of the North Carolina State College Industrial Engineering Department. Prof. Llewellyn presented a paper outlining the techniques and mathematics of "Linear Programming." He pointed out that the technique is not a new one from a mathematics point of view, but it is having modern applications in solving complex planning problems of manufacturing. Using an illustration problem for a hypothetical plant producing three products over the same array of machines, a series of first order equations were set up, which when expanded would define the various ways of allotting production resource time. A group of six equations with eight unknowns results; thus, it becomes necessary to solve the equations simultaneously to find the production plan that will give the best over-all profit for the manufacturer.

Pointing out that the series of equations for defining a problem for a large complex of machines and products could become so time-consuming by human methods, satisfactory use of "Linear Programming" depends on the availability of digital computer equipment. Computers for such work must be of a memory drum type with sufficient memory to store the information for the problem at hand. Use of the Simplex (a mathematical term) system for solving planning problems is being used by many industries throughout the country, Professor Llewellyn stated, although he could cite no instances in the textile field.

The report emphasized that the new management technique could best be applied to a company manufacturing varying products over a production line not tailored for the products. The more chaotic the conditions of operation, the better tool "Linear Programming" becomes, and it would be of little value on a well-planned production line designed specifically for the product being produced; therefore, the speaker emphasized that it was an incorrect concept to say that a linear programming system would be inaugurated when management had straightened out most of its other problems. He termed the system a means of solving a multiple step problem with step-by-step mathematical logic.

The industrial engineering department, Professor Llewellyn stated, may not be directly responsible for a "Linear Programming" system but will certainly have to supply the data for operation of the system. For this information a good standard data program would be necessary.

Establishment Of Standards

Bill Kiser discussed briefly the establishment of standards and followed with a film presentation on a blanket folding operation. The wide variances in the methods of selected operations was discussed and allowed the selection of best elements from those exhibited by any one operator. He explained that so many movements and elements entered the operation that the filming technique was necessary to evolve the new methods. Construction of clamp stands have greatly improved the operation and made the folding of the blankets a one-operator job rather than two and have greatly increased the speed of the operation. The use of film study methods was promoted as being most efficient in an operation with a wide range of complex movements.

Panel Discussion

Highlighting the second day of the program, a panel group with wide audience response covered "Sound and Economical Maintenance of Time Standards." The three-man panel consisted of C. L. Land, Woodside Mills, Greenville, S. C.; C. M. Jorgeson, staff superintendent, Martha Mills, Thomaston, Ga.; and Bill Price of the management consulting firm of Henderson, Lindsay and Michaels. Prefacing the round-table discussion with the statement that this session would continue the discussion panel of a previous meeting of the organization, the program continued for over one and one-half hours.

A discussion of the frequency of checking standards on different jobs brought out the fact that if checks for variances are not on a routine basis but result from being called to the job then standards tend to become established on a maximum basis. This is true since the call to study a job usually results when conditions are at their worst.

On a poor running spinning job it was pointed out that the operation was requiring an undue portion of time creeling, thus letting ends-down rise. By placing extra help on for creeling it was found that over-all ends-down dropped, thus leveling out the peaks.

A system of operator work cycling for spinning was presented which has led to a 50 per cent reduction in ends-down in one mill. The operators are taught to follow an exact cycle through their job so that they arrive at the beginning point at regular intervals. The system requires the operator after any absence from the floor or interruption of the cycle to go completely through the job, creeling only, to catch up. On the next cycle the normal routine is followed. Additional benefits to the system are improved employee morale, since a feeling of being caught up after each cycle results.

Under questioning it was brought out that the system is used and works even on mixed counts. Time for each cycle must then be based on the count requiring the fastest cycle. One limitation is that the counts must be fairly close together. Walking time for the operation must be added equal to the total distance through the job.

A show of hands indicated many mills have a uniform job load in spinning. The unfairness of the system was pointed out indicating that the more capable workers were really being penalized rather than a bonus being to the less efficient workers as is often thought.

The two-day meeting closed with the announcement of the Spring meeting March 13-14, 1958, at which time new officers for the year will be elected.

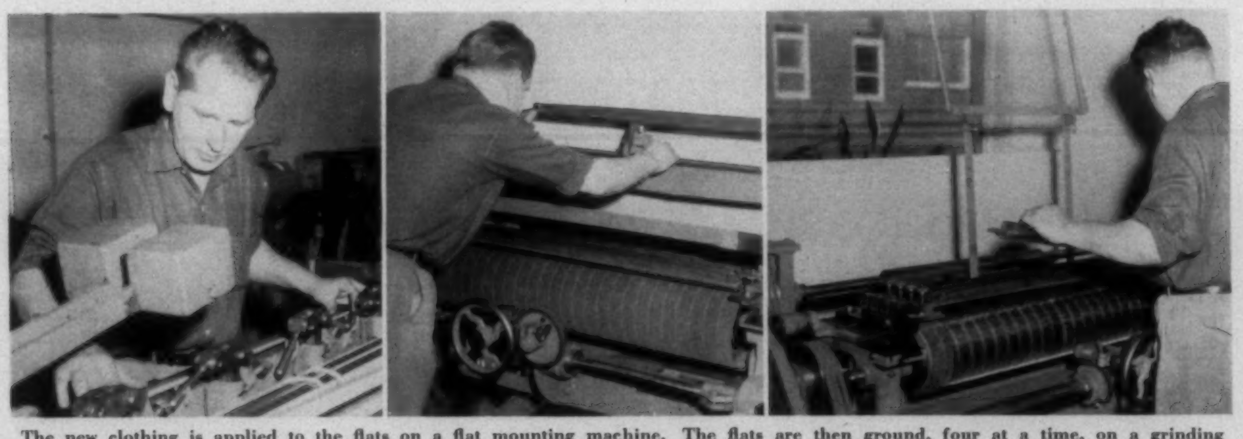
Swedish Card Clothing

OLIVER D. LANDIS INC., Charlotte, N. C., has opened a card flat clothing shop in Gastonia, N. C., which features the newly introduced wire of A/B Kardbeslag of Norrkoping, Sweden. The flats are clothed in the conventional manner as well as in a special two-strip fashion which is known as "interval clothing." In interval clothing there are two rows of wire per flat. The Swedish card clothing specialist, Stig Hagman, who is in charge of the shop, reports that the two-strip card flat is used extensively in Europe. Because about twice the normal amount of carding per flat is accomplished by the new wire arrangement, neps are said to be reduced to a marked degree.

Some 95 per cent of the Swedish card clothing is ordered with Duropan-hardened points. This careful hardening of the points is designed to keep the cards in a condition of sharpness for much longer periods of operation. Consistency in degree of sharpness enables the grinding cycle to be run eight to ten times longer with the card still retaining its low nep count. The characteristics of the Duropan-hardening process consist chiefly in the fact that the points receive a certain definite degree of hardness and that they do not snap off even when subjected to great strain. The points bend below the hardened zone which is said to be absolutely free from structural cracks.

A/B Kardbeslag, which translated from Swedish means Card Clothing Inc., also has a special wire for use on flats with metallic clothing on the cylinder and doffer. Known as Ridiga, this wire is different from conventional wire in that it is oval in shape. In addition, the knee of the wire is closer to the foundation cloth. Both the foundation and the wire are stronger than that found in conventional clothing.

The new clothing is applied to flats by first removing the old clothing and carefully milling the flat ends. This milling is done to precise tolerance on a conventional milling machine. The new clothing is applied to the flats on a flat mounting machine. The flats are then ground, four at a time, on a grinding machine. As in milling, this work is done to precise tolerance. After an inspection, the diamonds are brushed off the wire points on a brushing machine. The flats are brushed four at a time. The re-clothing operation is completed after the flats are subjected to a final inspection which serves to assure uniformity throughout the set.



The new clothing is applied to the flats on a flat mounting machine. The flats are then ground, four at a time, on a grinding machine. Extreme care is taken to assure that the flats are square. After grinding, the flats are put on a brushing machine to remove diamonds.

Notes From The S.T.A.

A Discussion On Labor Relations

The Piedmont Division of the Southern Textile Association held its Fall meeting Saturday, Sept. 28, at the Catawba Country Club, Hickory, N. C. One of the features of the meeting was a panel discussion on labor relations, presided over by C. S. Willard, superintendent of Pacific Mills' Rhodhiss Division at Rhodhiss, N. C. Panel members included M. L. Brackett, general manager of Highland Park Mfg. Co., Charlotte; R. M. McCrary, superintendent of Carolinian Mills, High Shoals, N. C.; and Bernard L. Coleman, Pacific Mills, Rhodhiss. The following is a transcript of the discussion.

Chairman: Communications play an important part in employee relations, as we all know. And to have good communications, we must have them from the top down as well as from the bottom up. How much influence do you think good communications have on employees?

Mr. B: I think it varies with different companies. For one thing, the size of a company has a lot to do with its communications system. In a big integrated company, for example, I think management would have a lot of information to pass down to certain echelons. In smaller companies, this same type of information might be passed on down further.

In general, I think any information affecting employees directly should be made available to them. This would include information concerning operating changes, scheduled changes on production lines, changes in job assignments or even information concerning the introduction of new equipment or new machinery. By passing this information along to the employee you can prevent rumors from getting started.

I also think employees should be kept apprised of business conditions that affect their earnings. This is information they are vitally interested in, because a cut-back in business affects their purchasing habits. If you are planning to cut your running time, I think you should notify your employees of your intentions four to six weeks ahead of time if possible. I also think that the employees should be told whether or not the company is making any money. They know if the company is making money their jobs are likely to continue.

Those are just a few examples of the type of information that should be passed from the top down. And, of course, there are different methods of passing down such information. You can pass it down through your overseers and second hands; you can make use of committees; or you can use an employee publication.

Chairman: What about information coming from the employee on up the ladder? Luke, can you tell us anything about that?

Mr. Brackett: Well, at times we do have questions to which employees want an answer. Of course, the most frequent question asked in any mill is "why"? They want to know why a thing is done, and we have found in most cases that if they know why, they will do a better job for you on it.

Some of the questions that come up haven't anything at all to do with the mill. For example, with all this publicity about Asiatic flu, some of our people asked a lot of questions about it. So we went to the Health Department and got what information we could on the subject and passed it on to our folks. We feel that when an employee asks a question, he deserves an answer—the best one we can give him.

I think a very important thing to consider in passing information up and down the line is how close are your supervisors to his people. It is important to the mill to have supervisors who really know his people and live close to them.

Personal Contact

Chairman: I think that's right, Luke. Now I'd like to ask Bernie Coleman about personal contact with employees.

Mr. Coleman: We recently have gone into a rather large personal contact program with our employees. To get it started, our personnel man got together with the supervisors and made a list of subjects which each supervisor has used as a guide in talking with his people. In each department, when time allows, we try to get the supervisor to talk to those employees under him. We find this to be a good way to find out what they're thinking about, and what they're concerned about. We think these conversations do a lot of good. They are handled right through the supervisors, the overseers, the superintendent. We encourage the second hand to put down anything the employee may say, regardless of how wrong the employee may be, and then correct him if he is wrong.

Chairman: Do you feel you have uncovered a good many hard

Brackett, McCrary, Willard, Coleman

A feature of the Fall meeting of the Piedmont Division of the Southern Textile Association was a panel discussion on "Labor Relations." Members of the panel included M. L. Brackett, general manager of Highland Park Mfg. Co., Charlotte; R. M. McCrary, superintendent of Carolinian Mills, High Shoals, N. C.; and Bernard L. Coleman, superintendent of Pacific Mills, Rhodhiss, N. C. Serving as moderator was C. S. Willard, chairman of the S.T.A.'s Piedmont Division. Mr. Willard has subsequently resigned as superintendent of Pacific Mills in Rhodhiss, where he has been succeeded by Mr. Coleman, and is no longer connected with the textile industry.

Horace Pennington of Cone Mills Corp., Greensboro, N. C., president of the Southern Textile Association, extended an official welcome to mill men attending the Fall meeting of the association's Piedmont Division at the Catawba Country Club, Hickory, N. C., on Saturday, Sept. 28. Mr. Pennington pointed out that the S.T.A. is currently marking its Golden Anniversary. He reviewed plans now in the making for next year's anniversary convention which will be held June 19-21 at the Grove Park in Asheville, N. C.

feelings employees have had because of things that happened four or five years ago?

Mr. Coleman: Yes, and things even older than that—little things that have caused hard feelings. Maybe someone was passed over for promotion, or taken off of one job and placed on another—things like that. If you dig through old payroll records and other records, you can usually find out what really did happen, and when you set the facts straight, they really appreciate it.

Employee Questionnaire

Mr. C: In a questionnaire sent out to our employees some six months ago, we asked what could be done to improve working conditions. The reply came back that the employees wanted hot water in the rest rooms. Well, that had never crossed our minds. So we put in the hot water at a cost of about $300. When the next questionnaire went out, we asked them to list improvements made in working conditions. They all mentioned hot water. We made some other improvements in the rest rooms, too, and they were also cited on the questionnaire.

Chairman: I know that sometimes when you start asking a lot of questions, some of the employees get the idea you might be trying to put down on paper some of the gripes they may have against the company and that you might use this information against them. Once you get a system working, though, most of them realize you're trying to promote their own welfare.

The New Employee

Another subject we might discuss for a moment is the proper induction of a new employee. Bob, what is your practice on this?

Mr. McCrary: When a person comes to our plant looking for a job, the personnel department sends him to see the overseer. If the overseer hires him, he is sent back to the personnel department to be given instructions about his new job. The department tells him all about our various employee programs; goes over our general plant rules; and covers our safety rules. When he reports for work, the overseer introduces him to the second hand or the assistant overseer who gives him more specific information about his particular job. He is told the detailed information of the job, his pay, how he is paid, and things of that nature. These things are taken up with him again later, and, of course, he's given the opportunity to ask questions of his immediate foreman at any time.

Chairman: Don't you think that the follow-up is just as important as the preliminary instruction?

Mr. McCrary: Whenever you report to a new job, it takes a long time to clear up all the questions you have about it.

The Individual Worker

Chairman: One thing that has been stressed in the last few years is the growing importance of the individual worker—how important he is to his plant's success whether he's a sweeper or whatever he might be. Luke, have you anything to add to that?

Mr. Brackett: I was reminded last night of that very subject, the importance of the individual, by an article in TEXTILE BULLETIN which I received yesterday. The article tells about an official of our company, Mr. Thomas W. Church Jr., our executive vice-president. Let me read you a few words about the importance of the human equation in mill management.

"A mill manager cannot afford to ignore the human element . . . mills are more than spindles and looms . . . loyalty has to be earned . . . a mill may survive in 'good times' without paying attention to its community, even as it may survive for a time without a planned program of machinery replacement . . . participating in worthwhile community endeavors may appear expensive at first glance, but it pays off in the long run if soundly conceived."

These words were originally said by Mr. C. W. Johnston, who was president of Johnston Mills and Highland Park Mfg. Co. dating back to 1895. His grandson is our president today, and those same philosophies are what we live by.

Birthday Greetings

Chairman: Are there any comments from the floor at this time?

Mr. E: I'd like to pass on something our company has been doing in the way of personal relations. I don't know whether any of you are using this idea, but our company sends out birthday cards to each employee on his birthday. Our personnel manager also keeps track of birthdays, and when an employee has a birthday he is invited into the personnel office for a bull session over a cup of coffee or a coke. Then the assistant manager and the overseer have the employee in for the same thing. It works out pretty well.

Job Security

Mr. McCrary: I'd like to say something on job security. I think the individual employee likes to know where he stands in regard to promotion or transfer to a better shift. For example, many of our new employees go to work on the second or third shifts. Then they are promoted to the first shift on the basis of length-of service. If it comes to a better job, then the employee has to be capable of running it or capable of being trained quickly for it. Of course, if a person can run a set of looms on the third shift, he is capable of running them on the first shift. In years past we all know of instances where supervisors had their pets, and they were allowed to promote these pets. Whenever that's done, it leaves a sour taste with the people who were passed by.

Mr. Coleman: Do you move them from shift to shift on their length of service on the job or on their length of service in the department?

Mr. McCrary: We move them by length of service on the particular job.

Mr. Coleman: What about a loom fixer, say, who has been a weaver for 15 years and a loom fixer for only a year?

Mr. McCrary: We go by the length of service in the department.

Mr. E: We feel that if he is capable of holding down that job on the third shift then he should be moved to the first shift when an opening arises. Of course, if he isn't capable of handling the job on the third shift, then he's taken off that job.

Mr. Brackett: How about lay-offs? Do you take them from the bottom of the list?

The featured speaker at the Fall meeting of the Piedmont Division of the S.T.A. was Grady Stephens, head of the communications division of the General Electric Co. at Newton, N. C. Mr. Stephens spoke on "Labor Relations."

Engrossed in shop talk at the Fall meeting of the S.T.A.'s Piedmont Division were Robert T. Stutts, president of Carolinian Mills, High Shoals, N. C., and M. L. Brackett, general manager of Highland Park Mfg. Co., Charlotte. Mr. Stutts is a past president of the S.T.A. and is currently active as a member of its board of governors. Mr. Brackett is chairman of the Piedmont Division.

Mr. McCrary: Yes.

Mr. Brackett: You don't take efficiency into consideration?

Mr. McCrary: We feel that any man who isn't doing his job efficiently should have been taken off the job before then.

Mr. Brackett: The length-of-service method of lay-off is certainly the least painful. Of course, I think every foreman should be allowed to keep his best and most efficient employees. It may be that the newest loom fixer is the best.

Mr. Coleman: Suppose you have a weaver who has been on the job for ten years. You have another man who has been a weaver for 15 years but he doesn't do as good a job as the man with ten years. If it becomes necessary to make some changes and move one of them back to the third shift, would you move the second man?

Mr. McCrary: He would go wherever there is a vacancy. If you have a vacancy on the third shift, he goes there. If it's on the first shift, he goes there.

Mr. E: You go by efficiency then, not length of service?

Mr. McCrary: He has to be capable. That's what it amounts to.

Mr. Brackett: Referring again to those birthday cards, we have just finished a little deal that has really amazed us. We photographed all our employees and made up composites. Then we made group pictures of each department. We put these pictures up in the various departments along with pictures of management, etc. It created more interest and enthusiasm than anything I had seen in a long time.

Mr. F: That brings up something else—taking pictures of old-time employees and putting them up in an honored place in the office. That creates good will.

Mr. Brackett: When we took our group pictures, we put those employees with the longest service in the middle of the picture.

Mr. E: Another thing we do is put on what we call our Twenty-Five-Year Banquet. Every time a man completes 25 years with the company he gets a solid gold watch engraved with the name of the company, his name and the year he came to work. Each department puts on its own dinner for its own men. Either the president or vice-president of the company usually speaks at these dinners and presents the pins and watches.

Harvey Sills, Saco-Lowell Shops, Charlotte, gets off a good one to Horace Pennington in this shot taken at the Fall meeting of the Piedmont Division of the S.T.A.

Research . . . .

is a state of mind

By M. EARL HEARD, Vice-President
West Point Mfg. Co.
West Point, Ga.

Mr. Heard was the principal speaker at the Fall meeting of the Northern North Carolina-Virginia Division of the Southern Textile Association. The meeting was held last month at Fieldale, Va., under the auspices of Fieldcrest Mills.

RESEARCH is largely a state of mind, as religion is largely a state of mind. One must be in a suitable frame of mind, be receptive, be humble. The problem is, how can we improve our quality and cut our cost? Man's innate curiosity, from time immemorial, has led to progress. In the early days of research we tried nearly everything but did not know how many variables we had and did not know too much about running tests and did not know the significance of the figures we got. The measuring tools we have today were not available. We can now run a test and pretty well control it. We know how many samples to take, how many hours to run them, and just exactly what a significant figure on the test is.

Why do we need research departments? It is because we have seen the necessity of organizing a special group to do a special job. While it should not be stated that nothing can be developed in the textile industry without research departments, we know that scientific research is much more likely to get results. Often the by-products of research into a particular problem are more valuable than the thing for which the project was organized.

Management must help research by setting forth clear objectives, by telling it in what direction it is going and how much time it has. The research and development division of a business is a major division and must be considered so by any management which intends to be in business from now on. When management has a well organized and well manned research department, management has in its hands a greater tool than is recognized.

Since research is a state of mind, we must have that receptive state of mind if we are going to get anywhere. If you have that you do not necessarily have to have a big company. It would be really easier, in my opinion, for one mill or one company to have a research department because every one of us is different. Every mill manager is different from every other; every operating group he has in the mill is different from every other such group. In any mill you have just one crowd to sell, and as you get to know them better you know what will appeal to them.

A research laboratory has to be a living growth. It is not established by building a laboratory and hiring a corps of workers. It is something that has to grow and develop.

Why bother about research? If human needs did not change and if there were no competition or if we had all the business we wanted and did not want to expand, then probably we could do without research.

Industrial research today is one of our largest industries. From six to eight billion dollars will be spent on it this year. It is utilizing the services of approximately 500,000 people. In dollars it is just about equal to the sales of the Standard Oil Company of New Jersey, which is the second largest corporation in the world.

One of the most fruitful research activities of a private corporation is investigation into production processes, expansion of man-output and ability to establish an expanding market, investigation into machines and processes.

There is a rather widely held opinion that research is an activity for which only major companies are equipped. That is a mistake. It takes only one man with vision.

An effective department of research should be on an equal footing with other departments and should report directly to the president of the company. The position of director of the research department is one of the most important in the company and is one of the most difficult. Unless the morale in the research department is high and the director can provide enthusiastic leadership, it will not be an effective operation. In the research department such leadership is probably the most important of any department in the company.

Whatever the size of the group in research, the director has the job of welding the members into a smoothly operating team and then the job of making the research department an integral part of the operation of the company. The biggest thing he has to do is sell new ideas to the management and to supervision. That is because new ideas mean change and human beings are inherently opposed to change. In working with the rest of the company, whether sales or production, he meets his first difficulties. Thus a successful research director spends as much time building bridges to other human beings as on research itself. He can do this by being co-operative and by trying to understand their point of view. This he has to do continually.

There is a belief that money will produce ideas, but nothing could be further from the truth. Money is only a means to an end and often, as history shows, a not indispensable means.

The products of research are information and a successful completion of projects. The ultimate success of research and development depend heavily upon the rest of the company, to apply the information supplied.

There has been a great deal of publicity lately concerning the expected population increase in America in the next generation, which it has been predicted will be 40 per cent. In the working population, however, there will be only a very small percentage of increase. So the company that intends to maintain its position in the economy must produce 40 per cent more with very little increase in labor or in cost. I do not know how we are going to do it, but we may have to do it. Twenty years hence we may have to turn out twice as much with only one-tenth more hours of work.

It is very possible that automation may be the next big change. Automation may be defined as the use of machines to run machines. Labor has said that it is used to downgrade labor, but we know there will be little room for untrained or unskilled laborers. The fact confronts us that we are going to need better trained workers and more of them than ever before.

No enterprise is making its contribution to society, which supports it, if it does not provide surplus capital for further advances. Profits are essential. It is the surplus of production over consumption which supports research and education and many of the finest elements in our culture. Leisure for children in school and for oldsters in retirement is one of the finest features in our culture.

It has been said that a man's personal philosophy, his way of looking at the world and the men and women around him, determine his personal success more than any other thing. The time may come when an evil man or one who has no clear sense of values can not be a successful administrator. When you meet a successful manager, whether in sales or research or production, look and see if he is not a man with a sense of the true values in life.

The definition of research I like best of all is that it is a state of mind, an insatiable desire to know why. It is a state of mind which may be acquired by almost anyone. It might be said of research as it has been said of whiskey: "There ain't no bad research; some is just better than others."

N. Y. Board Of Trade Holds Awards Luncheon

The work of the Textile Section of the New York Board of Trade in furthering the interests of the textile industry for the last 20 years was lauded November 14 as the trade body held its annual awards luncheon in the Sert Room of the Waldorf-Astoria, New York City. The presentations were made to John C. Hughes, chairman of the board of McCampbell & Co. Inc., and Barry T. Leithead, president of Cluett, Peabody & Co. Inc.

Praising the co-operation the Textile Section has fostered among all segments of the industry, Mr. Leithead urged the Board of Trade unit to undertake a joint symposium on their common problems, bringing together textile manufacturers and the garment industry as a means of promoting their well-being. Mr. Hughes likened the textile industry to the legitimate theater—a fabulous invalid—which has often been on the verge of extinction but which has always bounced back. Mr. Hughes reaffirmed his faith in the ability of the industry to grow and prosper with the country. Engraved silver trays were presented to both men by William P. Wright Jr., of the J. Walter Thompson Co. and chairman of the Board of Trade's textile section.

Twisting Handbook Now Available

N. A. Truslow's *Handbook of Twisting* is now available from Clark Publishing Co., P. O. Box 1225, Charlotte 1, N. C., at $5 a copy. The handbook stems from a series of articles on twisting written by Mr. Truslow for TEXTILE BULLETIN. The series first appeared in September 1953 and was concluded in February 1956. Containing what is believed to be the most comprehensive information yet compiled on the subject of twisting, the book is generously illustrated with pictures and graphs, and is complete with an index and bibliography. The author, who is assistant manager of the textile development department of the United States Rubber Co. at Winnsboro, S. C., has made several revisions in the material since it first appeared in series form.

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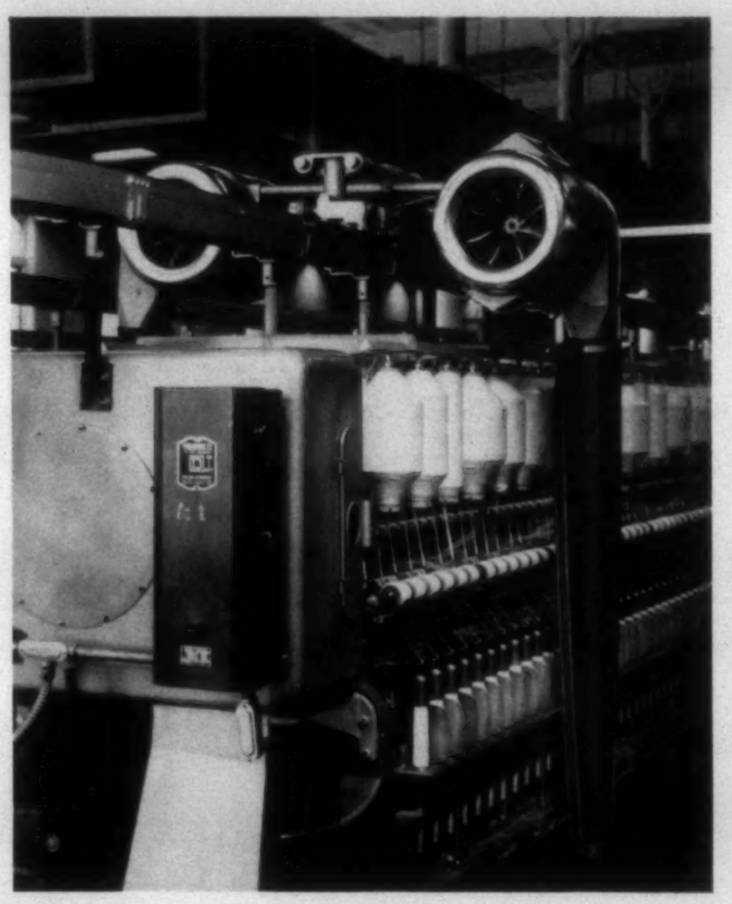

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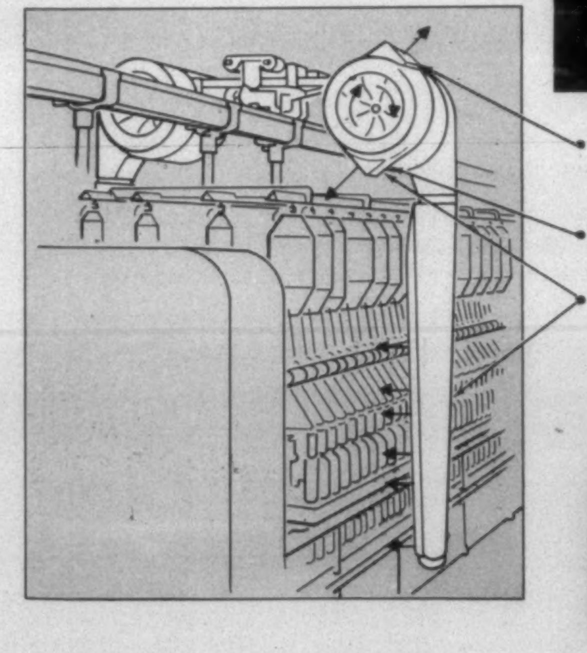

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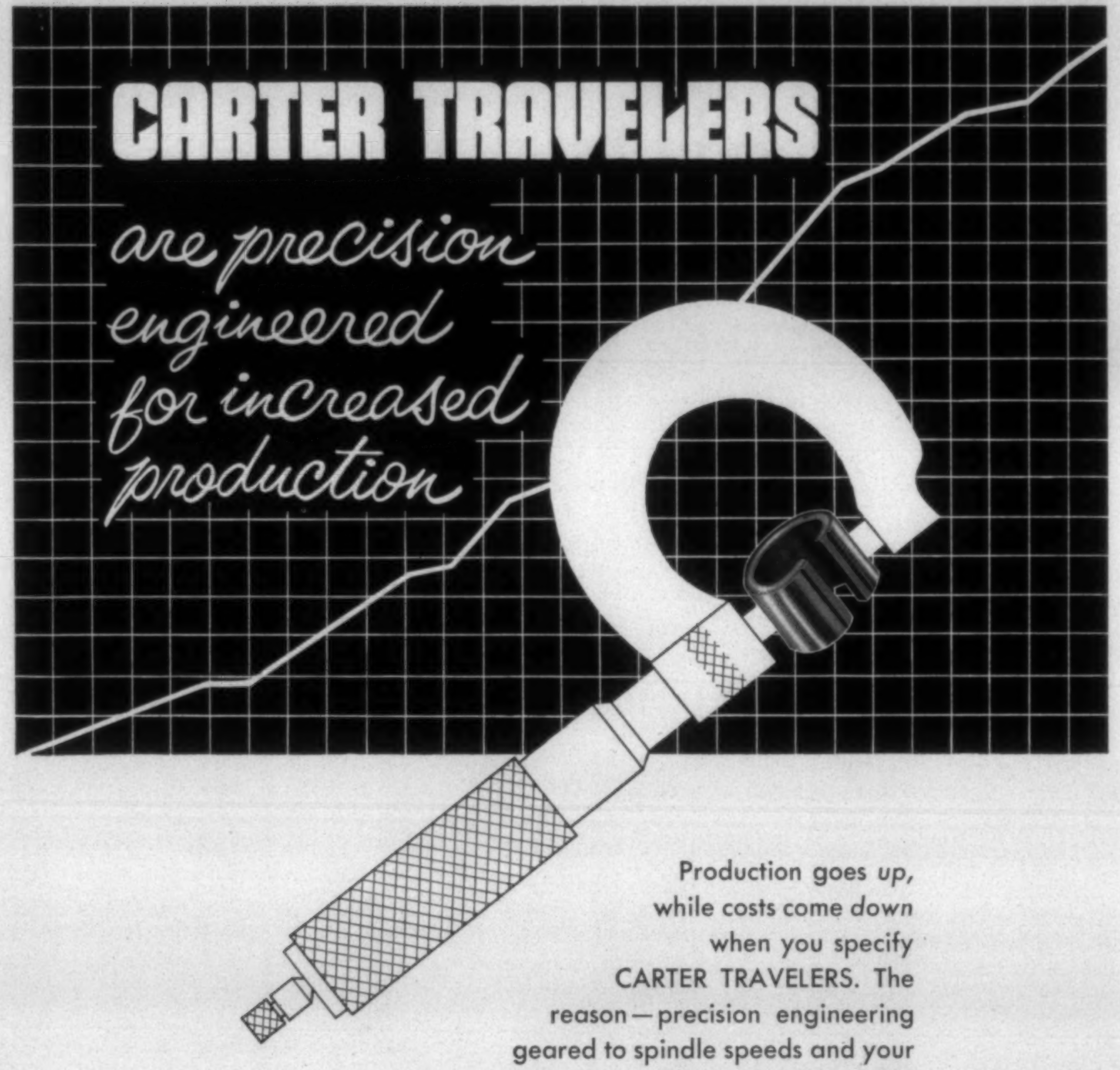
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Opening, Picking, Carding & Spinning

Factors Affecting Twist In Roving

By CLEVELAND ADAMS, School of Textile Technology
Alabama Polytechnic Institute, Auburn, Ala.

The art of choosing the correct twist for roving and yarn has contributed immeasurably to the success of many operating executives. In the past this operation was largely a matter of experience and experimentation; however, this article explains that the correct twist can be determined in a more scientific manner. It is a report given to a special group of the Alabama Textile Operating Executives, Oct. 11, at Thach Auditorium, Alabama Polytechnic Institute, Auburn.

IT is generally agreed that the amount of twist in roving should be no more than enough to hold the roving together and prevent stretching in winding it on the bobbin and while it is being drawn through the creel from the bobbin in the following process. To put enough, and not too much, under varying processing conditions while using stock with widely varying fiber properties is all there is to it. Our preliminary tests show that all of the 12 factors suggested for study as affecting twist required in roving do have some influence on optimum twist. There are also others. Some of the factors, such as fiber properties, make the roving stronger or weaker for a given hank of a given twist, while other factors such as overhead cleaning may necessitate extra twist to prevent stretching in spinning.

Fiber length, as is well known, definitely affects the twist required. The amount required decreases progressively as the length increases.

Fiber fineness likewise, but to a lesser degree, affects the twist required. The finer the fiber (with more fibers per cross section) the less twist required. The Micronaire and Aerolometer have provided more knowledge of the influence of this property on twist.

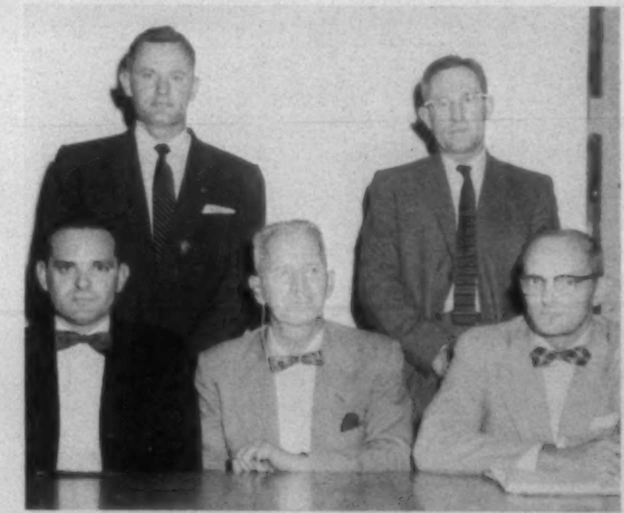
The influence of fiber uniformity is more difficult to measure. However, it is known to affect the drafting properties of the fiber and the twist required for optimum results.

Fiber Cohesion

When present to a certain degree, twist is beneficial to the drafting process by preventing the fibers from spreading and separating from each other and by retarding the forward movement of the fibers as they are drafted. On the other hand, with too much twist a mutual pressure among the fibers is exterted, which even when cohesion is not sufficient to cause fiber breakage, will cause enough resistance to prevent the strand drafting efficiently and uniformly. The proper amount is largely determined by the quality, length and weight of material, considered in relation to break draft, and the character of control immediately preceding the front line of drafting rolls in the next machine.

Roving Evenness

The more uniform the roving produced the less twist may be inserted in the roving. This is because of the fact that in uneven roving the twist runs to the thin places, resulting in excessive twist in the thin places and insufficient twist in the large places. The number of turns of twist in any part of a roving or yarn is approximately inversely proportional to the number of fibers in that part of the roving or yarn, and the diameter of the yarn at any given cross-section is directly proportional to the number of fibers at that cross-section. It is essential that proper twist be maintained in back roving to produce an even yarn. Production of the fly frame and spinning frame is governed by the front roll speed, which in relation to the spindle speed, governs the amount of twist. Thus if by lowering the twist, the speed of the front roll can be increased without increasing the spindle speed, the result is



The panel which discussed various aspects of the twist problem consisted of: *(standing, left to right)* Jack Simpson, Southern Regional Research Laboratory, New Orleans, La.; and F. D. Benson, Courtaulds Inc., Mobile, Ala.; *(seated, left to right)* Busch Landstreet, U. S. Government Spinning Laboratory, Knoxville, Tenn.; John Duerst, Coats & Clark Inc., Clarksdale, Ga.; and Neal Truslow, author of *A Handbook Of Twisting*, U. S. Rubber Co., Winnsboro, S. C.

more production, less ends down, better quality and lower cost.

Oftentimes when trouble arises the tendency is to increase roving twist, without looking elsewhere for the real cause which may be blunt skewers, dirty trumpets or bottom rolls, worn or dry top rolls, rough creel rods or creel rods improperly set and many other causes. Some type spinning creels put more strain on the roving as it is pulled off the bobbin than others. Some overhead cleaning systems also cause roving to stretch if twist is not adequate.

Draft And Bulk

The type draft on spinning has some influence on the roving twist needed, the higher drafts requiring increased twist. Usually a five to ten per cent increase is adequate, depending upon other conditions. The bulk of stock drafted and the amount of draft both affect twist as well as the roll settings and top roll weighting required.

It is generally agreed that the closer the rolls can be set, the better the assurance of even drafting. When roving contains too much twist, it is necessary to use a wider roll setting to draft it, thus causing loss of fiber control and uneven drafting. Too much roving twist also makes it necessary to use more weight on the top rolls, especially if rolls are not opened up. It also causes grooves in top rolls which further contributes to unevenness.

Uniform and proper humidity is important in both the roving and spinning operation. The moisture content of the yarn materially affects the drafting properties of the fibers, the higher moisture increasing fiber cohesion and drafting friction. If humidity is too low, static electricity will be created causing fiber spreading and excess shedding and ends down. Effects of varying moisture in roving is often noted, too, when roving has been stored.

Experience has shown that any efforts made to maintain the proper twist in back roving pay dividends in better, more even yarn, better breaking strength, fewer ends down per frame, greater production, lower costs and effective conservation of irreplaceable equipment. This is especially true on long draft spinning now generally used.

Generally speaking, the purpose of twist in yarn is to give it strength, usually maximum strength. Yarns will break at maximum strength only if optimum twists are inserted. In some cases the amount of twist is varied from the amount which gives maximum strength in order to produce other desired features in the yarn. Low twist yarns may be desired to give certain appearances such as softness, fullness, luster or covering quality. In other cases, as the tire industry, yarns may be super-twisted to give greater elasticity, resilience and durability, or to give it a hard and wiry feel.

Cleveland L. Adams, of the School of Textile Technology, Alabama Polytechnic Institute, Auburn, Ala., shown here greeting the Fall meeting of the Alabama Textile Operating Executives, has taken a leading role in urging further study on twist problems. Seated behind Mr. Adams is Wendell Morriss, Avondale Mills, Birmingham (Ala.) Plant, and Pete Warren, Russell Mfg. Co., Alexander City, Ala.

Direction Of Twist

A yarn or cord has "S" twist if, when held in a vertical position, the spirals conform in slope to the central portion of the letter "S", and "Z" twist if the spirals conform in slope to the central portion of the letter "Z". The "Z" twist was formerly called regular or right hand twist, and "S" twist called reverse or left hand twist. The new designation was adopted by A.S.T.M. to eliminate the confusion encountered in the use of the old method.

Standard Test Conditions

Standard conditions of cotton yarn shall be reached by the yarn when in moisture equilibrium with a standard atmosphere having a relative humidity of 65 per cent at 70° F. (21° C.) A tolerance of plus or minus two per cent is permitted in relative humidity and plus or minus 2° F. (1.1° C.) in temperature. (Note: moisture equilibrium is reached when, after free exposure to air in motion, there is no increase in weight. The standard regain for cotton yarn is about seven per cent of the dry weight.)

The twist tester used for determining turns per inch of twist in yarn on staple fibers and the method or procedure used for determining twist should conform to the requirements prescribed by A.S.T.M. Standards On Textile Materials prepared by A.S.T.M. Committee D-13 on textile materials.

Effect Of Twist On Yarn Strength

Without twist, or that is, when the fibers are parallel, no strain is required to pull the yarn apart. As twist is added the fibers are entwined around and cling to each other until the point is reached where fiber slippage ceases and the percentage of fiber breakage increases. This occurs as the yarn is twisted to the point of maximum strength. Maximum strength is said to be obtained when sufficient twist is given the yarn which will, with minimum strain to the individual fibers, prevent any slipping when force is applied in a longitudinal direction. Beyond this point, the strength decreases. In low twist yarns the influence of twist is so small that yarn breakage takes place almost entirely by fiber slippage. Above about seven turns per inch fiber breakage increases. There is a close relation between the percentage of fiber fracture and yarn strength with more than 60 per cent of the fibers breaking at high twist when the yarn strength is at it highest.

Not only is the character and strength of the yarn largely determined by the degree of twist inserted but the running of the product during processing can often be much improved and the cost of production greatly reduced by using correct twist. Usually not only strength but also the specific purpose for which the yarn is intended to serve and to some extent the fiber properties of the cotton, is considered in determining optimum twist.

Predetermining Optimum Twist

Since the first well known "square root of the number" formula was developed by Koechlin in 1928, many others have been offered which take into consideration additional influencing factors. While the Koechlin formula, twist per inch equals the twist multiplier times the square root of the number, is still used by some today, it has long been recognized that this formula is not flexible enough.

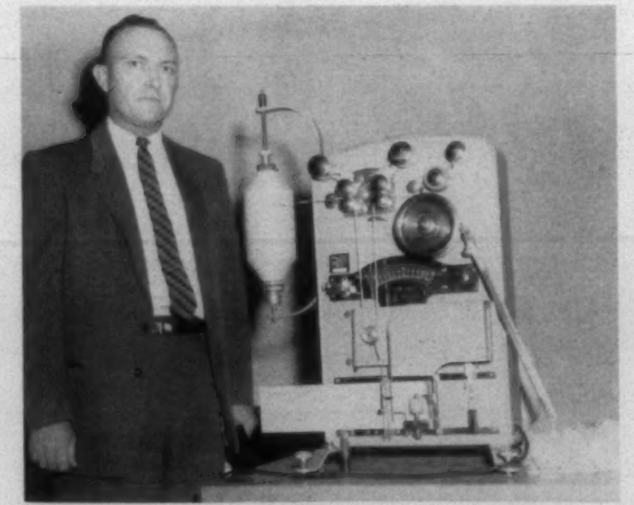
Around 1900 Emil Staub advocated the use of progressive twists and in the early '30s Carl Brandt did extensive work on the subject of twist. About 1939 John Duerst developed a trigonal formula for optimum twist for maximum strength which included the staple length of the fiber: $(V1 + 8n - 1)$, in place of N^n.

Soon after this M. E. Campbell presented data showing that progessive twist multipliers gave increasingly stronger yarns for all counts up to a certain point and then leveled off and decreased. The optimum twist multiple was the same for all counts of yarn but was different for each staple cotton. The relationship between the optimum twist multiple and the staple length was curvilinear and was expressed by the formula: $T.M. = 2.72 + 1.55L^{-1.85}$; When L = fiber length. From this equation the twist multipliers listed below were worked out for corresponding staple lengths. These multipliers will give maximum strength regardless of yarn count.

Classer's Staple Length—Inches	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-1/4	1-3/8	1-1/2
Optimum Twist Multiplier	5.35	5.00	4.70	4.45	4.25	4.10	3.95	3.75	3.60	3.45

Twist And Yarn Diameters

In spooling, warping and fabric construction, yarn diameter and its relationship to twist takes on significance. In his book, *Textile Calculations,* published in 1880, Ashenhurst gives a very exhaustive treatise on yarn diameters, which is, in spite of more recent debatable and conflicting theories advanced, still is considered a true and reliable guide for all practical purposes. The rule developed by Ashenhurst is probably the most commonly accepted formula as being nearest correct for ordinary purposes. It is based on the general rule often used for cotton yarns, that *the diameter is the inverse of the yards per pound.* The fundamental principle is based on the assumption that a thread of yarn is a flexible cylinder of uniform density and should as a consequence have a constant diameter. Most of the various theories of yarn diameters have been built up from this base.



Charles Harris, Pepperell (Ala.) Mfg. Co., discussed the operation of his company's Resistiro Rex twist tester. The device presents a graphical representation of the twist variation of roving from soft-to-normal-to-hard.

For cotton, the rule for ascertaining the diameter of yarn is by extracting the square root of the number of yards of yarn per pound and deducting eight per cent. This deduction is purely arbitrary and used to modify the yards per-pound to get accurate figures. It is likely that further study will bring about further modification.

Using Ashenhurst's formula, suppose we wish to find the diameter of a number 25/1 cotton yarn. Diameter

$$= \frac{1}{\sqrt{\text{yds./lb.}}} - 8\%, \text{ or } \frac{1}{.92\sqrt{25 \times 840}} = \frac{1}{132} \text{ in.},$$

or 0.0076", or 7.6 thousandths of an inch. As a rule the diameter of a yarn is expressed as so many diameters per inch rather than as a fraction of an inch. This is known as the reciprocal of the diameter. This is useful in determining cloth constructions, as it is obvious from the above example that if the diameter of 25/1 yarn is 1/132 inch, that 132 threads can be placed side by side in an inch of cloth.

According to Carl Brandt there is a direct relation between the yarn diameter and the twist per inch at the point of maximum strength. Determining the twist and diameter at this point and expressing as an empirical formula we have: diameter X twist per inch = constant; or, twist per inch = constant/diameter. This constant will hold for all yarn numbers but will change as the staple length, the constant becoming smaller as the staple length increases.

Brandt has developed a formula for determining this constant, thus: Constant = 230 — 98 (staple length in inches). Using this formula for determining constants and

Brandt's formula, $\text{Diameter} = \frac{52}{(\text{count})^{2/3}}$ for calculating yarn diameters, the proper twist for any yarn number may be ascertained by dividing the constant for a given staple length by the diameter of the yarn.

Carl Brandt's formula gives the diameter as measured by the Randall & Stickney thickness gage under slight compression, which is approximately 80 per cent of the uncompressed diameter. This checks closely with Ashenhurst's apparent diameter. Example for 25/1 yarn, diameter $= 52/(25)^{2/3} = 52/8.55 = 6.1$ thousandth of an inch, which is 80 per cent of the 7.6 thousandths calculated above in Ashenhurst's formula.

A simpler formula, used by Universal Winding Co. for determining the yarn diameters as a guide for setting slub catchers, is: Diameter equals .0383 divided by the square root of the yarn count. For 25/1 yarn the diameter would be .0383 divided by the square root of 25 equals 7.6 thousandths of an inch (do not divide by 80 per cent). It will be noted that this diameter is nearer to that obtained

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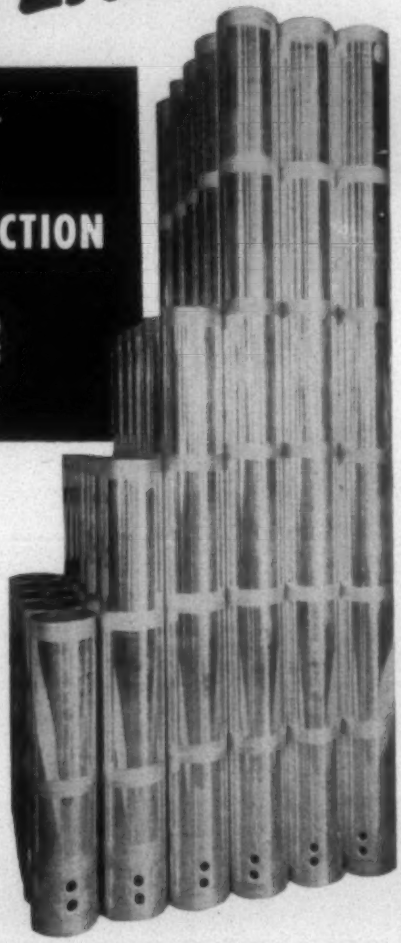

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by Brandt's formula. This is no doubt due to the fact that the diameter of a yarn under tension, as in winding, is reduced due to the fibers tending to grip and become more compact.

Fibers Per Cross Section

As a rule fiber length and fiber fineness go together. As the staple length increases the fiber becomes finer, and as a consequence, the longer the staple the more fibers per cross-section in a definite size yarn. While this close association exists, the fineness cannot in every instance be determined by the length of fiber. Actual tests show that a straight line relationship exists and the fibers per cross-section may be calculated for any yarn number by multiplying the fibers in a known yarn count times the count and dividing by the count in which the number of fibers are being determined. For example, if there are 160 fibers in a cross-section of one-inch staple number 22s yarn, for 30s yarn there would be $(160 \times 22)/30=107$.

Yarn Contraction

Contraction in yarn is a shortening in length caused by some physical or chemical force. In adding twist to yarn, up to a certain point the contraction increases as twist increases. In order to maintain a constant count in a yarn while increasing the twist, the contraction in length due to increase in twist must be offset by regulating the draft. The rate of feed is diminished in proportion to the increase in weight. By calculating this amount the contraction may be ascertained. It may also be determined by dividing the weight difference by the length; that is, the difference in weight for a given number of yards before and after the twisting process.

The angle of twist is the angle which the twisted fibers make with the longitudinal axis of the yarn. It may be, as Brandt believes, that the angle of twist, or direction, is common in all yarns regardless of size at that twist which produces a yarn of maximum strength. This point needs further study, however.

Additional Study

As these comments will show, there is need for considerable study and research on this subject. Other items on which work could profitably be done are the effect of twist on warp sizing, bleaching, dyeing, finishing, fabric shrinkage, fabric comfort and fabric life. In ply yarns more knowledge is needed on balancing single and ply twist for certain end uses. It is hoped that mills interested in specific phases of this problem will continue this study and report results from time to time.

The first patent on a piece of textile machinery was granted to Ira Draper in 1816 for his self-acting temple. This device enabled a weaver to tend two looms instead of one. The U. S. textile machinery industry is considered to have come into being in 1814 when a machine shop was set up at Waltham, Mass., to build a practical power loom and other machinery for the Boston Mfg. Co. The model for the loom was a design adopted by Francis Cabot Lowell from a British machine and into which were incorporated mechanical advancements developed by Paul Moody. Cloth was successfully woven on the loom in 1815.

A Study in Loom Fixing

By FRANK D. HERRING (Part Seventeen)

LOOM maintenance is one of the most important and generally neglected phases of the weave room supervisor's and loom fixer's responsibilities. While it is true that the supervisor must accept full responsibility in his department, he must be able to shift certain responsibilities to the various employees under his direction. One of the qualifications for a supervisor's job is that he must be a teacher and should be able to instruct any employee in his department in the best and most efficient way to do the jobs in the department.

In order for his teachings to be really effective, the supervisor should go beyond merely instructing each employee in *how to do* the job. He should be able to show the employee the reasons *why* doing the job in a given manner will work to the mutual benefit of all concerned. This requires understanding and patience on the part of the supervisor. If properly done, the instruction will result in not only getting the job done but also the supervisor's gaining the respect and confidence of the employees. These are two attributes which are always found in the successful supervisor.

Modern, automatic looms are much better built machines than the looms of a few decades ago. In view of this fact the general tendency among many of the present-day supervisors is that their responsibilities have been reduced regarding maintenance of the machines. This is a badly mistaken idea. Modern looms are much stronger, are put together more securely and are made of more durable materials. These things are necessary because more is required of the modern looms than their predecessors. They must also operate at much higher speeds.

Complicated Motions

While making these improvements the builders were forced to make the component parts of the loom more automatic and, thereby, more complicated. The additions which have made the loom more efficient have greatly increased the work of the loom fixer. This is true because in order to set up, adjust and maintain the loom, the fixer must be a more highly skilled workman. The increased speed of operation of the looms makes precise workmanship necessary. The old, hit or miss, guesswork type of loom fixing which has been used extensively on the older model looms will not work out satisfactorily on modern looms. Due to the additional automatic motions and attachments and the more stringent conditions under which the looms are required to operate, it is easy to understand why more emphasis must be placed on maintenance to assure efficient operation of the equipment.

Maintenance in its true sense is a subject that has been given very little constructive thought by the present-day weave room supervisors. Too many of them think that since they have a good loom which is well constructed, it will need little maintenance for years to come. Actually, however, nothing could be farther from the truth. Maintenance work should begin when the looms are newly installed in the plant. If the maintenance is neglected when the looms are new, after they have been put into operation it will not be long before they are in such a deplorable condition that a good maintenance program is not possible to operate. In this case a complete overhauling job is indicated. However, if the modern loom is given the proper attention from the time it is installed it will operate satisfactorily in competitive production until technological developments have rendered it obsolete.

The most disastrous and costly single item that can happen to a weaving mill is to allow the looms to operate under such conditions that an overhauling job becomes necessary. This does happen frequently. In fact there are many looms in operation today that are producing at substandard levels because they have been allowed to slip into a run-down condition. They are producing inferior quality fabrics at low efficiencies and at high unit costs.

Overhaul Or Replace?

When looms get into this condition the company must either buy new looms or completely overhaul the old ones. Either alternative is costly. A partial overhauling job is a waste of money. Even if the looms are given the best overhauling job possible, they are still old looms and cannot be expected to produce like new machines. However, a properly done overhauling job will usually lift the mill out of the red and put it back into profitable competition with other mills.

In order to do a good overhauling job the loom must first be stripped to the frame consisting of: (1) loom sides; (2) arch assembly; (3) front and back girts; (4) right and left-hand middle girts; (5) top girt; (6) outside bearing supports; (7) top girt center brackets; and (8) breast beam. The entire frame structure must be put in good condition before applying any of the component parts of the loom.

In regards to loom maintenance, the general consensus of opinion is that good loom fixing is the basic fundamental for permanent maintenance. However, good loom fixing is only one of the necessary contributing factors. Two things which may take priority over good loom fixing are proper lubrication and a tight, sturdy, rigid frame structure.

Without good lubrication, proper maintenance is impossible. Without a tight, rigid frame that will stay put, good loom fixing is rendered useless. In short, to obtain satisfactory and continued maintenance of looms, three things are absolutely necessary—lubrication; tight, rigid frame structure; and good loom fixing.

Lubrication

Proper lubrication, the first named essential to good loom maintenance, should be approached with careful constructive thought and understanding. Looms are very difficult machines to lubricate properly. They are not smooth running machines but operate with almost every conceivable slam-bang reverse motion. This makes it difficult to retain the lubricating agent in the proper places.

Proper lubrication on the older model looms did not present much of a problem because they are loosely built machines compared with the modern-day looms. They were provided with open bearings which were easily accessible and did not require special oils and greases. In addition, they operated at much lower speeds than modern looms. The modern looms are much more precisely built. They consist of more parts and motions and they are equipped with open, sealed, roller and ball bearings many of which are fitted with grease gun connections.

On the older model looms, a good non-flowing oil with the proper viscosity could be selected which would serve to lubricate the entire loom satisfactorily. It is not that simple with the modern loom; but one oil can safely be used on all the open bearings, gears and cams. However, special greases are best for the ball and roller bearings.

Proper Lubricant

The greases used must not harden or clog the grease grooves in the bearings and must not separate and leave a deposit to clog the grease grooves. The weaving department supervisor should be the person best qualified to determine the type of oils and greases needed and also the frequency of application. He should know the demanding requirements which are made on each bearing and part of the loom. Of course, he should carefully consider the speed at which the looms operate and the type fabrics being woven. High speeds and heavy fabrics add to the strain and burdens on the loom. The daily oil applications should have close supervision.

The basic foundation for the oiling schedule is the work done when the warp is changed. This is the time at which all oil holes and fittings are readily accessible and a thorough job can be done quickly. While the warp is off of the loom all oil holes should be cleaned out thoroughly. Should the weave room supervisor be in doubt as to the proper viscosity or brand of oils or greases best suited for his loom's requirements, he should consult with a lubrication engineer or a service man from the loom builder. This oil selection phase of the operation is of vital importance.

Loom Frame

All of the parts, or motions, of the loom, basically, are mounted on some portion of the loom frame structure. These parts require certain specific settings and adjustments. Many of them are parts which work in conjunction with other parts which may be either moving or stationary. These various settings must be accurate and have the proper timing. It is easy to understand that they are all dependent on the accuracy of the position of the portion of the loom frame structure to which they are attached. If that part of the frame structure has been loosened by vibration or strain it will cause some of the parts attached thereto to be thrown out of adjustment or thrust an excessive strain upon them. In either event, excessive wear and breakage will be the result.

In order to appreciate the real value of a rigid, secure frame structure, consider things which would result if the breast beam is allowed to work loose. Practically the entire filling motion; the battery, transfer mechanism, filling feeler, temples, etc., are basically mounted on the breast beam. All of the parts mentioned require very close and accurate settings and split second timings. Obviously these things cannot be obtained if the breast beam is loose.

Normally, the outside bearing supports are not included when the framework of the loom is mentioned. However, they should be included when tightening of the loom framework is considered because if they become loose excessive strain and wear on many parts will be created. In addition an extra burden will be put on the motor. This will have a tendency to slow down the operation of the loom and interfere with the efficient functioning of the machine. The tightening of the framework of the loom is of such importance that the supervisor should not depend entirely upon his loom fixers to get this work done. If it is done in a haphazard manner, many of the parts will never be tightened until irreparable damage has been done. It is not possible to say just how often this work should be done in each mill. This should be determined by the supervisor basing his assumptions on the speed of the looms and the weight of the fabrics. Under average operating conditions—(five—24-hour days per week), the loom frame assembly should be tightened every three months.

Tighten Frame Bolts

The best and most economical way for the supervisor to get this work done is to put two experienced loom fixers on the job. Let them work together with one man in the weaver's alley and the other in the back alley. The fixers should stop each loom and tighten all framework bolts. By working this way, the two men can go over several hundred looms in eight hours. By having them concentrate on nothing but the loom frame bolts, the fixers will be able to do a good job without overlooking any vital parts.

Some weave room supervisors draw up charts for the loom fixer's use. Certain things about the loom are specified to be checked and tightened on given days of each week or at other particular times. This method is mostly wishful thinking on the part of the supervisor and will not get the job done effectively. The main reason for this is that most of the loom fixers do not have the time, between flags, to do this work. If the work is undertaken, they may have to let several flagged looms stand. This will put the fixer under a strain and he will hurry to get through and may overlook something.

The contacting portions of the loom frame parts are milled or machined by the loom builders and they fit squarely and snugly when put together. If they are kept

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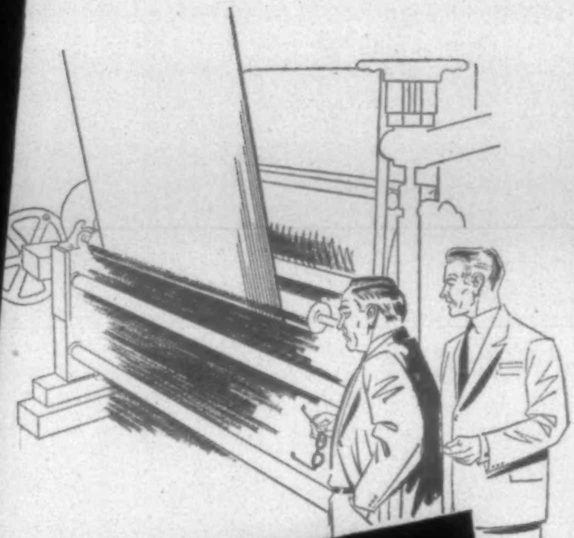

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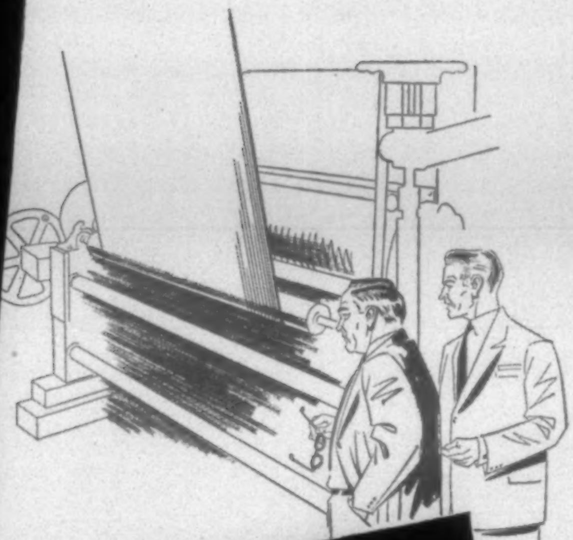

FOR BACKFILL

Victor
10-55

MORE MELLOW HAND
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securely tightened after the loom is put into operation they will not become worn and create lost motion. If the parts are not maintained securely after going into operation they will slip out of proper adjustment and become worn. In addition, they will not be drawn back into the correct position when they are tightened. This results in a permanent dislocation. Perhaps the dislocation may be slight but just a few of them will add up to a lot of trouble for the loom fixers.

The loom builders put dowel pins in some of the loom frame connecting parts at the points of contact. These pins help to hold the parts rigidly in place if the bolts are kept tight at all times. If the bolts are allowed to work loose the dowel pins alone will not hold the parts together securely. Loss of motion and wear will be the result.

When it becomes necessary to do an overhauling job on looms, the frames should be stripped of all parts and then it should be properly adjusted. After tightening the bolts lightly, ample dowel pins should be put in at all the connections. If the connecting bolts are tightened before the dowel pins are put in some of the connections may be drawn out of position due to the previous wear.

Good loom fixing is the third essential in the proper maintenance of looms. Without proper lubrication and a tight, rigid frame, good loom fixing becomes very difficult, if not impossible. Good loom fixing consists of many things, first the fixer should know how to apply, set up and adjust each part comprising the entire loom assembly. Just as vital is the importance of tightening the parts properly after they have been adjusted. If they are not properly secured in place the fixer's efforts will, of course, have been wasted.

The loom fixer should do a lot of checking over his looms at the proper times. When he is called to work on a loom he should have a good idea of where to locate the trouble when he has seen its result. Knowing the cause and the result, he should make the necessary adjustments or replacements of parts quickly and with ease.

The loom fixer should check over his looms when the warps are changed. This is the only time that all the parts of the loom are readily accessible to him. With the warp out of the way, the fixer can make his inspection quickly and easily and do a good job of replacing any excessively worn parts.

Notes From The S.T.A.

A Discussion On Slashing

The Northern North Carolina-Virginia Division of the Southern Textile Association held its regular Fall meeting Saturday, Oct. 19, at Fieldale, Va., with Fieldcrest Mills acting as host. One of the features of the meeting was a panel discussion on slashing. Acting as moderator was W. L. Kirby Jr., superintendent of Wennonah Cotton Mills Co., Lexington, N. C. Serving as panel members were W. A. Kirk, overseer of slashing, Erwin Mills, Cooleemee, N. C.; T. B. Hamrick, foreman of weaving, Fieldcrest Mills, Draper, N. C.; Landon Joslin, technical superintendent, Dan River Mills, Danville, Va.; and Earl Snyder, overseer of preparation, Erlanger Mills, Lexington, N. C. The following is a transcript of the discussion.

Chairman: Our first question is about creeling over the back or laying in—which system is better? Mr. Kirk?

Mr. Kirk: Our system of creeling is old, because we don't have room enough to put it out straight. We pull it to the front and count there. We have to count it before we run it over the cylinders.

Mr. Snider: We handle ours the same way.

Mr. Hamrick: We do the same thing.

Mr. Joslin: We did that extensively before the war, but the practice was discarded some time during the war because it does take more rubber.

Chairman: You mean the rubber cost is higher?

Mr. Joslin: Yes, it costs more. You see, you have to pick it. You pick it the same as you do on the frame. You have to bring it up to the front and then have to transfer it to the comb. You always lose a few ends doing it. In the particular slasher room in which we tried it, we had an ample supply of slashers—so we didn't have to work for slasher efficiency. The major advantage, I would say, is that where you have to buy slashers you would have to buy fewer. I think it has very great possibilities, particularly when you are considering the purchase of new equipment. It does take double creel space, of course. While one is running, you have to creel in the other; you have to have it all run in and picked and ready to go. So it means you have to have twice as much creel space.

Mr. A: I was very much impressed with it. When you talk about having to pick it twice, are they putting a dent lease in the back?

Mr. Joslin: You do not have to pick it twice.

Mr. A: They bring it into the comb. My idea was to use a girl as a drawing-in hand, to do the laying in. If you use a girl as a laying-in hand, the slasher tender can run slashers rather than laying-in. There is a saving in doing it this way.

Chairman: You mean the slasher hand makes more than a drawing-in hand?

Mr. A: Yes, some of them do.

Chairman: Suppose it takes approximately four hours, from the time you actually get the slasher started up, what do you think the new Mooresville system could do?

Mr. A: I think there would be a saving of time.

Chairman: Would you say an hour?

Mr. A: Less than an hour. The disadvantage I see is space. The new system requires more space.

Question: Does it increase the labor?

Mr. A: From our standpoint, if we had room to put it in we would eliminate quite a bit of labor because we could do all the laying-in on the first shift.

Mr. Joslin: As I understand the Mooresville method, they have one creel above the other.

Mr. A: Yes, that is correct.

Chairman: Do you think that picking the ends into the comb would be of advantage in a grey goods mill?

Mr. Kirk: I do not think that it would when working with solid colors. Of course, it would be necessary when working with striped warps.

Mr. A: What about slashing quality? Assume it takes four hours to lay in the pattern and suppose this could be reduced by an hour using the new method.

Mr. Kirk: I do not think it would make much difference.

Mr. Joslin: We have some sets which we can start up in 15 minutes. We do not even have to dump the size. Of course, if you do not dump the size you save there. I do not know whether that would improve the quality or not.

Mr. B: Why do you dump the size?

Mr. Joslin: If it is necessary to take three or four hours to get a set ready you wouldn't want to leave the size in the size box.

Mr. B: Why?

Mr. Joslin: It deteriorates and scum forms on it.

Mr. B: Do you circulate the size when it is being stored?

Mr. Joslin: No, we do not circulate the size. We do not like to hold it as long as four hours. The length of storage time depends on the particular set being run. We just do not like to take a chance on holding size in storage too long.

Chairman: May we have another question?

Mr. C: Where you have a lot of stripes, do you get a different pick-up in the dyed yarn from that of the natural yarn?

Mr. Kirk: Colored yarn should be run over a pre-dry.

Chairman: He wants to know the difference in the pick-up between the dyed and the undyed.

Mr. Kirk: Colored yarn will not pick up as much size as the white.

Mr. Joslin: I find it just the opposite—the colored yarn will pick up more size than the white. When yarn has been dyed the natural waxes and oils have been boiled out, and it is more receptive to size than white yarn. We have to oversize the colored yarn in order to get enough on the white.

Mr. D: We have found that indigo-dyed yarn will take up size more quickly than the white yarn. The variable is in the cotton assuming counts and twist factors are equal.

Chairman: We cannot dry the colored yarn as dry as the natural yarn and therefore cannot put as much size on it.

Mr. D: The percentage of moisture present in the white or the colored is the main factor.

Mr. Hamrick: If colored yarn is run with a little moisture in it, the size will be weakened.

Chairman: That is a factor to be considered.

Mr. Joslin: We pre-dry all our yarn sending it into the slasher.

Chairman: Do you have cut-offs on your pre-dryers?

Mr. Joslin: Yes.

Chairman: Do they work automatically?

Mr. Joslin: Yes.

Mr. E: How long can you keep size in a storage kettle? For instance, in running two shifts, can the size be kept overnight?

Mr. Kirk: We keep it overnight.

Mr. E: At what temperature?

Mr. Kirk: 206° F. In doing this some viscosity is lost.

Mr. Joslin: It depends on whether you are running corn starch or potato starch. But we would not hold it overnight. We would not hold it longer than eight hours.

Mr. G: We keep our size overnight.

Chairman: Do you have any trouble?

Mr. G: No.

Chairman: What do you slash?

Mr. G: Blue denim.

Mr. H: At what temperature do you hold it?

Mr. G: 196° to 204° F.

Mr. H: Isn't it a whole lot thinner than it would be ordinarily?

Mr. G: No.

Mr. I: I think it would depend on the type of storage kettle.

Mr. G: We have a 1,200-gallon kettle.

Mr. I: I mean whether the kettle has open or closed coils.

A Member: It would depend on other things, too. I know a lot of mills that do keep their size over the third shift while others cannot do so.

A Member: We used to shut down from 11 o'clock Saturday night until 11 o'clock Sunday night and kept one kettle of size. We did this so we could start up without having to have someone come in early on Sunday to cook size.

Ward, Buchanan, Barton

Some 300 persons attended the Fall meeting of the Northern North Carolina-Virginia Division of the Southern Textile Association, held Oct. 19 at Fieldale, Va. A feature of the meeting was the election of Horace (Buck) Buchanan as chairman of the division for the coming year. Mr. Buchanan is superintendent of Erlanger Mills, Lexington, N. C. Howard Barton, who has served the association for many years as secretary of the N.N.C.-Va. Division, was re-elected to that post. Mr. Barton is with Fieldcrest Mills. Charles Ward, immediate past chairman of the division, was elected to the newly-created post of assistant secretary. He is with Highland Cotton Mills at High Point, N. C. Elected vice-chairman of the division was W. M. Kirby Jr., superintendent of Wennonah Cotton Mills Co., Lexington. Named to the division's executive committee were Frank Starling, superintendent of Proximity Mills, Cone Mills Corp., Greensboro; John Houston, superintendent of Spray (N. C.) Cotton Mills; and Ray O'Steen, superintendent of spinning, Washington Mills Co., Mayodan, N. C.

Chairman: Mr. Kirk, can you add anything to this discussion?

Mr. Kirk: Our kettles are closed coil types and we do not have homogenizers. The only time we would use size after four hours of storage would be to mix it with freshly prepared size.

Mr. Hamrick: We have open coil kettles but do not have homogenizers.

Mr. J: We do not recommend storing size overnight, but if you do, the temperature should not be over 200° F., and the speed of the paddle should not be over 20 r.p.m. Of course, you should have a closed coil kettle or the steam will weaken the solution.

A Member: Do soft warps result from a breakdown in the starch when it is held overnight?

Mr. Kirk: We take a viscosity test and if it is too low we do not use the size mix.

Mr. Joslin: I consider it to be a breakdown of the size.

Chairman: I think possibly you have two things here, a breakdown of the size and a build up of moisture. When storing size it is very hard to keep from building excessive moisture, even with a closed kettle.

Mr. K: I wonder if any of you have had experience with a creel with one of the warps running clockwise and the other counterclockwise. This is supposed to take up slack in the back beams.

Mr. Hamrick: We have had the problem but I do not see that clockwise and counter-clockwise beams have any effect. Our section beams are weighted individually.

Mr. A: Where you have a set which has a black end next to a white end, how do you keep them separated at the front of the slasher?

Mr. Kirk: Use drop wires, suspended on the reed, to separate the black from the white.

Mr. Hamrick: We split the colors and run them through different size boxes. We have the two size boxes in tandem. We run a lease rod into the sheet of yarn to separate the colors. Then we draw them in and tie them and they will run straight on the loom.

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Mr. L: In the interest of running constant, good tension, do many people find it advantageous, on a three-cylinder slasher with a single-motor, variable-speed drive, to run a Reeves drive to the size box?

Mr. Kirk: No.

Mr. Snyder: No.

Mr. Hamrick: We have multi-motor drives.

Mr. Joslin: We do not have that trouble. I suggest that we let Mr. Reeves of West Point answer the question.

Mr. Reeves: With a P.I.V. the diameter does not make too much difference.

Mr. Joslin: I would think it would be absolutely necessary.

Mr. M: We have the P.I.V. drive and it works satisfactorily. It will control the tension.

Question: Does the P.I.V. do this regardless of the size of your delivery roll?

Mr. M: That is right.

Mr. Kirk: I should like to ask what is the minimum stretch? We cannot get much below 1.5 per cent without carded yarns crimping up in front.

Mr. Hamrick: We control stretch on combed yarn to one per cent.

Mr. Snyder: We run both carded and combed yarn but have about 2.5 per cent stretch.

Mr. Joslin: We run between 1.20 and 1.40 per cent stretch.

Mr. Reeves: I think it depends on the set. If you run a really heavy set you cannot run a low per cent stretch. On lighter sets you do not have so much trouble.

Chairman: Suppose you have a blown beam and in backwinding you are unable to keep all the ends up. Do you put the ends in on your backwinding and retie or do you put them in at the slasher?

Mr. Kirk: We do it both ways. Of course, if the beam is blown really bad it has to be wasted.

Chairman: Say you have 15 lost ends. Would you run the 15 ends in on the creel?

Mr. Kirk: We would do it on the backwinding rather than on the slasher.

Mr. Hamrick: I should like to ask a question about ends catching on the immersion roll in the size box. Do you think it would be of any advantage to have a Teflon roll to prevent laps?

Mr. Reeves: I have seen it used very successfully. I see no reason why the Teflon should not stay on the roll. The temperatures the roll encounters in the size box would not hurt Teflon. Abrasion is about the only thing that will damage it.

Mr. P: Do you let the yarn turn the roll or do you drive it?

Mr. O: We drive the roll.

Mr. Hamrick: We have rubber rolls. I wonder what hardness of rubber should be run on a filament slasher and what hardness of rubber is required on spun rayon? I have never had trouble on one slasher which has a fairly soft rubber covering on the roll. We had another roll come in with the rubber as hard as a brick and it kept giving us trouble.

Mr. Reeves: There is a different rubber for filament and spun rayon.

Mr. Hamrick: I have trouble with those rolls all the time. The rolls stay in the slasher. What can be done other than raising them out of the size on spun rayon?

Mr. Reeves: I think most people get better results by raising the rolls out of the size.

Question: How much pressure do you run on your roll?

Mr. Hamrick: Anywhere from about 700 pounds up to 1,100 pounds.

Mr. Snyder: Does the hardness of these rolls vary with age?

Mr. Hamrick: Yes. The older the rubber gets the harder it gets.

Question: How often should the rolls be buffed when running cotton goods?

Mr. Q: We think they should be buffed about every three months.

Mr. R: We have not been running rubber rolls very long but we intend to buff them when they need buffing.

Mr. Joslin: One manufacturer, at least, makes rubber rolls of variable density—that is, softer near the core and harder near the edge.

Mr. Kirk: How do you clean these rolls?

Mr. T: With a steel wire brush.

Bleaching, Dyeing & Finishing

The Chem-acril Process For The Union Dyeing Of Acrilan-Wool Blends

By WALTER H. HINDLE, Associate Director of Research, The Chemstrand Corp., Decatur, Ala.

This paper, which was delivered before the New York Section of the A.A.T.C.C. held in Rochelle Park, N. J., October 18, tells of several processes for union dyeing Acrilan-Wool blends as well as the most recently developed Chem-acril method. In addition to explanations of reactions, formulation data is given and the effects of various chemical changes are shown graphically.

ACRILAN, Chemstrand Corp.'s acrylic fiber, is unique among the newer man-made fibers in that it was designed so that it could be dyed by existing wool dyestuffs and by methods closely similar to those in general use for wool. Incorporated with the, at least, 85 per cent acrylonitrile, of which the fiber is primarily composed, was a weakly basic material calculated to give Acrilan a dyeability closely similar to that of wool. In the dyeing of 100 per cent Acrilan, the original concept proved to be correct and, until the advent of basic and disperse dyeing systems somewhat later in the history of Acrilan, represented the most satisfactory method of dyeing a full shade range.

However, in the dyeing of blends of Acrilan and wool, because of the faster dyeing rate of wool, union shades were very difficult to obtain and it was usually found that the wool dyed almost to the complete exclusion of the Acrilan component of the blend. The problem was further complicated by the fact that, although Acrilan would dye well with wool type dyestuffs, a lower pH was normally required than for wool in order to obtain maximum color utilization and to effect full fiber penetration.

These complications in applying neutral wool dyestuffs to Acrilan-wool blends, where the dyeing rate of the wool was already more rapid than that of the Acrilan, using sufficient sulfuric acid to give full fiber penetration, were indeed serious. However, those dyestuffs, such as the acid metallized types that were normally applied to wool from heavy concentrations of sulfuric acid, could be used to produce union shades. The quantities of sulfuric acid used by this system of dyeing ranged from eight to 12 per cent owg. and dyeing times of five to six hours were required to effect good unions. Aside from the large quantities of sulfuric acid used, this system of dyeing suffered by the fact that the lightfastness of the light to medium shade areas was usually poor because of the lack of a satisfactory blue element. It became obvious, then, that to rely on the basic concept of a dyeability similar to that of wool was, in itself, not sufficient to solve the problem of union dyeing Acrilan-wool blends and that improved methods would have to be developed.

Cation Transfer System

The first generally used method in solving the problem was the cation transfer system. This system of union dyeing Acrilan-wool blends was based on dyeing the wool component of the Acrilan-wool blend by techniques normally used in applying a given dyestuff to wool. This, of course, resulted in the wool being dyed to the exclusion of the Acrilan. Sulfuric acid and specific quaternary ammonium compound were then added to the dyebath which resulted, in the case of the preselected dyestuffs, in a desorption of dyestuff by the wool and absorption by the Acrilan to give the same shade on both fibers.

Doubtless due to this movement of dyestuff, dyeings carried out this way were exceptionally uniform and many hundreds of pieces were dyed by this method on a commercial basis. This system of dyeing was dependent on careful dyestuff selection and, although many neutral and acid milling dyestuffs could be used, the neutral dyeing premetallized dyestuffs were not amenable to this process. Furthermore, although the dyeing was a single bath operation, it had to be considered "two-step" and with the demand for high speed production it became apparent that further work would have to be done.

The next method to be used on a commercial basis was the acid pretreatment process. In this method the dyeing rate of the Acrilan component of an Acrilan-wool blend was increased by a pre-dyeing treatment with sulfuric acid. The fabric to be dyed was treated at 200-210° F. in two gram/liter sulfuric acid for 20-30 minutes, after which it was rinsed cold. A non-ionic dispersant was added to the bath and dyeing took place using selected wool dyestuff including now the neutral dyeing premetallized types. The effect of the acid pretreatment was to stimulate the dyeing rate of the Acrilan and this was done to such an extent that in the early stages of the dyeing operation, at temperatures up to 150° F., the Acrilan appeared heavier than the wool component. From 150° F. to 200° F., the wool dyeing rate assumed dominance but close to the boil a transfer of dyestuff from the wool to the Acrilan started to give union shades in two to three-hour dyeing times.

Once again, many hundreds of pieces were dyed by this method. The salient point in this method was control in rate of temperature increase. By this method, the times of dyeing had now become closely similar to those of 100 per cent wool. The lightfastness of the neutral dyeing premetallized dyestuffs still gave cause for concern in certain men's wear shades and, although by now the acid pretreatment method was being used extensively, it became apparent that still further basic work was required to have a completely satisfactory all-round dyeing picture.

Chem-acril Process

Considerable time has been given to the prior art in the dyeing of Acrilan-wool blends, in order that the importance of the latest development may be fully appreciated. The latest development in the union dyeing of Acrilan-wool blends is called the Chem-acril process and involves addition of cationic and non-ionic materials to the dyebath without pretreatments. These commercially available materials, in conjunction with sulfuric acid and dyestuffs selected from all the types of wool dyestuffs, yield union shades within dyeing times commercially accepted for wool.

The cationic material which is called Chem-acril has several functions which will be discussed in detail. The dyeing rates of 100 per cent wool and 100 per cent Acrilan are plotted in Fig. 1. For this work, a neutral acid dyestuff was used and applied under conditions of pH best suited for Acrilan. Under these conditions the rapid exhaustion rate of the wool is observed while that of the Acrilan is seen to be slower. Under these conditions of dyeing it can readily be understood why a union between the two fibers becomes impossible.

The effect on the dyeing rate of the two fibers dyed independently by the addition of 0.75 per cent Chem-acril is that the dyeing rate of the wool has been sharply reduced, while that of the Acrilan remains unchanged. It can be conceived that now union between the two fibers, when dyed competitively, is feasible. A glance at the dyeing rates of the two fibers still shows that the Acrilan dyes at a faster rate at low temperatures.

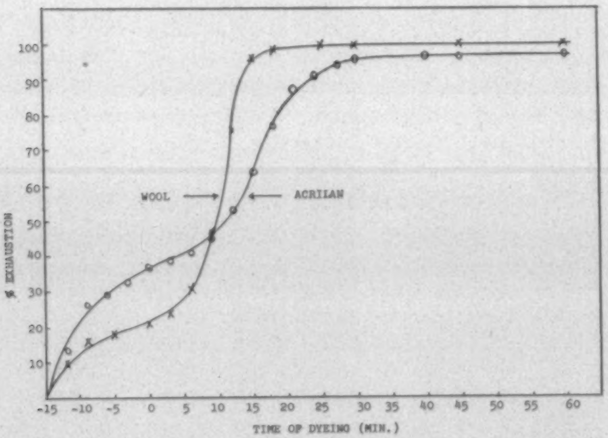

Fig. 1—Exhaustion rate curves for Acrilan and wool. Formula is 0.50 per cent Fast Scarlet BA, 1.5 per cent Triton X-67 and 4.0 per cent sulfuric acid with a 50 to 1 liquor ratio.

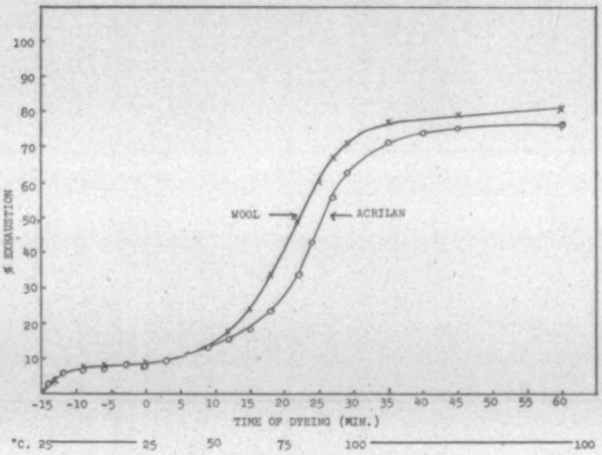

Fig. 2—Effect of A-203 on exhaustion rate curves for Acrilan and wool. Formula is 0.50 per cent Fast Scarlet BA, 1.5 per cent A-203 and 4.0 per cent sulfuric acid.

Fig. 2 shows the effect of the addition of three per cent Chem-acril on the dyeing rates of 100 per cent wool and 100 per cent Acrilan under the lower conditions of pH suitable for Acrilan. Now the curves are closely similar but the per cent dyestuff exhaustion has been reduced.

The conclusion to be drawn from the graphs is that under the pH conditions required for the optimum dyeing of Acrilan, the dyeing rate of wool is decreased to the point where it is similar to that of Acrilan by the addition of the Chem-acril dyeing assistant. Samples of Acrilan-wool blends were dyed from 0.75 per cent Chem-acril, 1.5 per cent non-ionic, using 0.6 per cent Fast Scarlet BA and two per cent, four per cent and eight per cent sulfuric acid, respectively.

Acid Concentration

Assuming that 50 per cent of the dyestuff on each fiber to represent a condition of union, using only two per cent sulfuric acid, results in the sorption of no more than 25 per cent of the dye on the Acrilan after 90 minutes dyeing time. However, by using four per cent sulfuric acid the theoretical union is attained in 45 minutes and transfer apparently continues to the point where 60 per cent of the dye is on the Acrilan in 90 minutes. By using eight per cent sulfuric acid, union is attained in 30 minutes with a still greater over-balance in 90 minutes. An ideal quantity of sulfuric acid in this case in relation to desirable dyeing time would appear to be about three per cent with a union in 90 minutes. This demonstrates the importance of acid concentration. Experiments were designed in varying the quantities of Chem-acril dyeing assistant and sulfuric acid on dyeings made still using Fast Scarlet BA.

Fig. 3 shows data on another function of Chem-acril. Two samples of 100 per cent wool were dyed in a 0.6 per cent shade of Fast Scarlet BA by the neutral dyeing methods conventional for wool. At the conclusion of the dyeing period four per cent sulfuric acid and 1.5 per cent of the non-ionic material were added to the dyebath in one case and the same materials plus 0.75 per cent Chem-acril in the other case. To each of these baths were added samples

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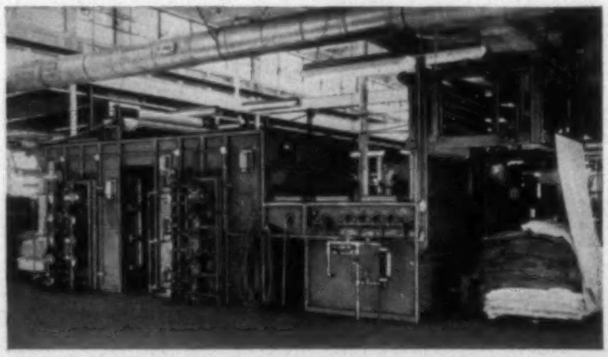

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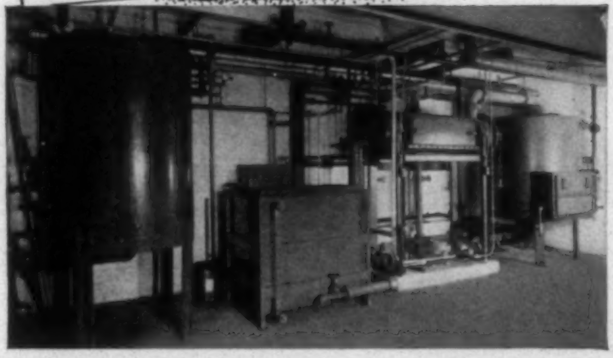

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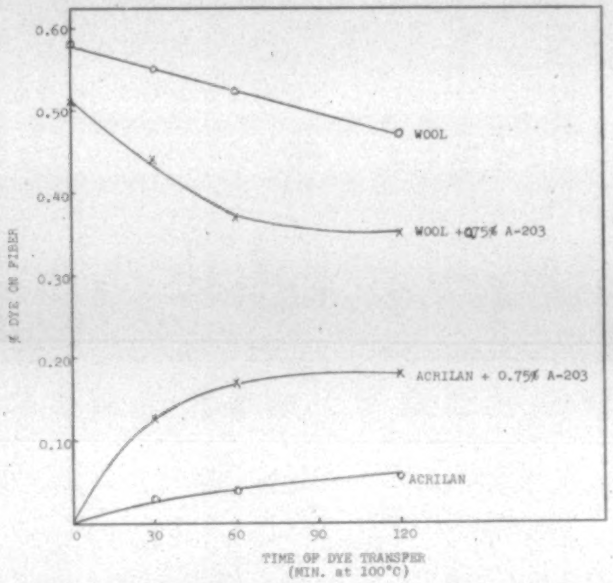


Fig. 3—Effect of A-203 on dye transfer. Formula is 0.60 per cent Fast Scarlet BA, 1.5 per cent Triton X-67 and 4.0 per cent sulfuric acid.

of undyed Acrilan after a corresponding weight of dyed wool had been removed and these were treated for two hours at the boil.

Consideration of the fibers treated with the non-ionic and sulfuric acid shows desorption of the acid dyestuff from 0.6 per cent-4.8 per cent and a sorption of the Acrilan from 0-0.05. When the Chem-acril was added, however, the desorption of the wool decreased from 0.6 per cent-0.475 per cent and the Acrilan sorbed dyestuff from 0-0.2 per cent.

In the absence of Chem-acril even the highest quantity of sulfuric acid does not give a union. It has been shown, however, that eight per cent sulfuric acid is more effective than the lower quantities. The addition of 0.75 per cent Chem-acril yields a union with four per cent sulfuric acid in less than 30 minutes and further dyeing times results in a two-to-one over-balance of the Acrilan. While eight per cent sulfuric acid, which failed to give a union without Chem-acril, yields a union immediately upon reaching the boil. The addition of higher quantities of Chem-acril does not significantly alter the previous data.

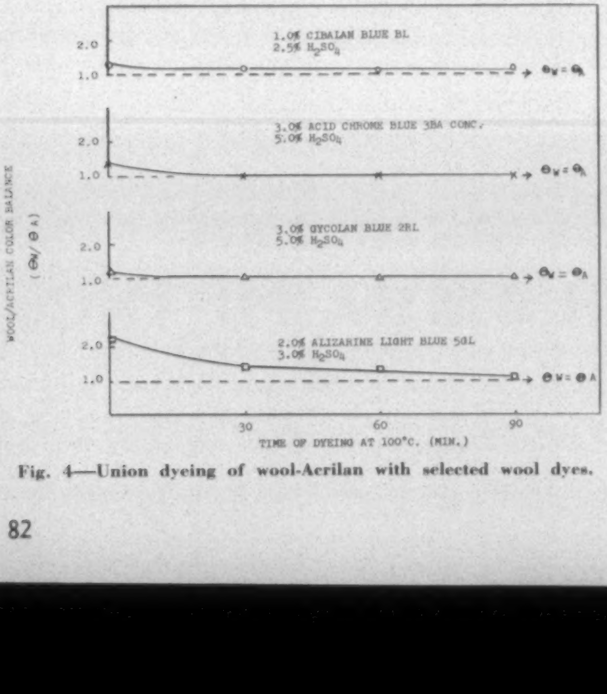


Fig. 4—Union dyeing of wool-Acrilan with selected wool dyes.

Conclusions

The conclusions to be reached from these data are: (1) the Chem-acril dyeing assistant slows down the dyeing rate of wool under conditions of pH suitable to Acrilan, to a rate closely similar to that of Acrilan; (2) the Chem-acril dyeing assistant promotes a transfer or levelling between Acrilan and wool; (3) the use of Chem-acril dyeing assistant reduces the quantity of acid previously needed to effect unions; and (4) a sulfuric acid—time relationship exists in which, within certain bounds, a reduced amount of sulfuric acid can be compensated for by longer time and vice versa.

The examination and evaluation of a large number of dyestuffs by these methods reveals the information that the quantities of sulfuric acid to be used vary with the dyestuff type. Fig. 4 shows typical examples of neutral dyeing premetallized, chrome, acid metallized and a neutral acid type. All the dyeings show excellent penetration with the specific quantities of acid used.

In commercial practice the prepared goods are circulated at 140° F. in 0.75 per cent Chem-acril, 1.5 per cent Triton X-67, the requisite amount of dyestuff and the sulfuric acid appropriate to the dyestuff type. The temperature is raised to the boil over 45 minutes and dyeing is carried out for one hour. Additions of dyestuff for shading purposes are made by reducing the temperature of the dyebath to 190° F. Sulfuric acid addition may be safely used to promote transfer from wool to Acrilan if the union is not complete within the prescribed dyeing time.

A full shade-range is available for both men's and women's wear with the wetfastness of the Acrilan component showing superiority over that of the wool. Several hundred pieces have been dyed by the foregoing method with every indication that the theoretical findings have been reduced to regular commercial practice.

Comparative Cost Centers For Finishing Plants

By WILLIAM S. SPROULE

FINISHING plants are faced with a shrinkage in margins of profits due to many factors. This condition makes it necessary for management to utilize every available tool within its reach to maintain a profitable operation. A few of the factors which are conducive to the shrinkage of margins of profit in finishing plants for the past few years have been: (1) increased labor costs through wage increases; (2) increased prices of dyestuffs, chemicals, supplies, etc.; (3) increased number of undesirable orders, by size and type; (4) practically no change in the price per yard received for finishing in the face of the three previously mentioned factors.

This merely means that the cost of finishing is on the upswing. Meanwhile, the price received for finishing is remaining the same. This results, of course, in less profit unless something is done to relieve the condition. Since no relief in price is in sight, management is forced to investigate every means to reduce operating costs.

Analyze & Evaluate

In order to properly analyze and evaluate operating conditions, a cost control system is one of management's most useful tools. Of course, most finishing plants have some form of showing cost of finishing already. However, it is doubtful that the necessary information pin-pointing every operation, or cost center, is available. A cost center is an individual operation or machine such as bleaching, jiggs, continuous dye ranges, printing, finishing ranges, inspecting, packing and shipping.

Once the cost centers have been established a standard is set. The actual conditions in the plant are compared with standard conditions to determine which, if any, of the cost centers is off-standard. The necessary steps may be then taken to remedy a bad cost situation and return the entire finishing process to an improved profit position.

Comparative Cost Centers

When the plant has reached this point in operation of cost systems, it should not become satisfied. It is still doubtful whether the operation is at its best position cost-wise and this condition will remain until the establishment of the correctness of the standard costs. The next step—establishment of comparative cost center standards—should be taken by the management to obtain this added assurance of optimum profitability.

This phase of cost is of utmost importance because of the wide variation that exists between individual plants. For example, one small item such as dyestuff waste standards may vary from four per cent to seven per cent between different finishing plants. From this example it may well be imagined the variation in standards that exist and are being used throughout the industry.

Establishment of comparative cost centers by converting standard cost centers to a common denominator, allows management to properly evaluate standard cost centers. The question "where do I stand competitively by cost centers?" may yield answers which have considerable bearing on the profitability of present and future operations in the finishing plant.

Multi-Color Combinations For Arnel Blend Fabrics

TECHNIQUES for running the same undyed greige fabric through a single dye bath and producing stripes, plaids and other designs in virtually unlimited multi-color combinations have been perfected for fabrics containing Arnel yarns, according to an announcement by Celanese Corp. of America, Charlotte, N. C. Arnel is the name of the company's triacetate yarn.

The process of obtaining a combination of colors and patterns from a single dye bath, known as cross dyeing, is commonly used in the textile industry but applying it to cloth with Arnel yarn content has required the development of entirely new techniques. The explanation for the apparently mysterious appearance of many colors in greige fabric in a dye bath lies in the fact that different yarns have varying degrees of absorptive affinity for dyes. Fabrics constructed of varying combinations of different kinds of yarns—acetate, Arnel triacetate, rayon and cotton, for example—can be dyed in related and contrasting colors and countless numbers of tone-on-tone shades. This process permits the production of what appear to be completely different fabrics from one base fabric.

Greater flexibility and economy for the converter, the middle man who buys unfinished or greige goods and styles them for sale to apparel manufacturers, were described as the main advantages of this technique. The converter may readily prepare fabric color combinations to meet changing style demands from a single greige inventory that does not become obsolete. The single dye bath method of creating multi-color fabrics is also more economical than the alternative one of weaving dyed yarns. Arnel and acetate may be affected differently by the same class of dyes but proper selection of dyes and dyeing conditions will give many different colors and countless numbers of related colors. By adding a third fiber, affected by different dyes, contrasting colors can be added, and the possible number of color combinations becomes infinite.

Effects Of Mercerization Described

Effects of mercerization are reported in the third of a series of papers on the physical properties of chemically modified cotton, describing results of studies carried out at the Southern Utilization Research and Development Division of the Agricultural Research Service, U.S.D.A., New Orleans, La. The report should be of interest throughout the cotton textile industry, as mercerization is one of the methods most widely used for the chemical treatment of cotton. Authors are Allan W. McDonald, Rollin S. Orr, Geraldine C. Humphreys and James N. Grant.

Yarns from six cottons selected for their widely different inherent fiber characteristics were mercerized under sufficient tension to maintain their original length, and while permitted to contract freely. Moisture regain, cellulose density, linear density, breaking load and elongation at break were measured. The different cottons were found to differ in their response to treatment; those samples with a low value in a property generally displayed the greatest per cent change in that property. Large differences in the properties of the fibers and yarns were associated with the condition of mercerization whether at constant length or slack. Mercerization tended to equalize differences between the properties of fibers in a sample, as well as between those of different samples. One of the most striking effects of mercerization was the general increase in breaking load; an increase of 50 per cent in the case of one sample.

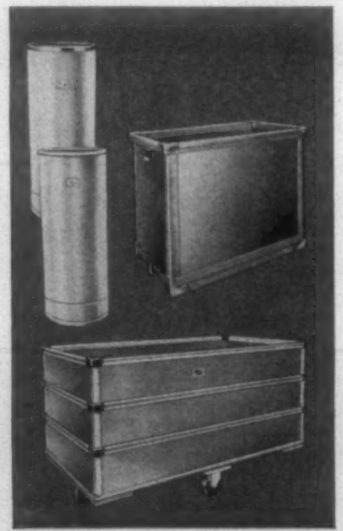
Rare Dyeing Book Donated To Lowell Tech

The earliest known printed book on dyeing and spot removing was presented to the Alumni Memorial Library at Lowell (Mass.) Technological Institute for its rare books section Thursday, Nov. 14, by Dr. Sidney M. Edelstein, president and technical director of Dexter Chemical Corp., New York City. The little 12-page volume was printed in 1532 in Mayence, Germany, where the Gutenberg Bible was printed.

THE NATIONAL SCENE

GARMENT MANUFACTURER ENDS CROWDING AND CONFUSION with job-designed Vulcanized Fibre Kennett Receptacles by National. Delicate fabrics used to be stored and moved in plywood and cardboard boxes at the Griffin Garment Co., Griffin, Ga. These makeshifts took up space intended for extra machines and created delay and confusion in work distribution. But when the company put Kennett Receptacles to work, *efficiency rose 25% with a 10% saving in space*. Additionally, women employees found lightweight Kennett Receptacles easy to lift, handle and move.

KENNETT CONTROLS WORK LOAD, SPEEDS PRODUCTION. Work-in-process now travels in Kennett Containers. From these, each operator's work goes into special Kennett Receiving Trays designed to fit under sewing machines (a space formerly wasted.) Another slant-top Kennett Box catches finished work coming from the machine and protects it from dirt and damage. Result: a streamlined operation and more space for extra machines.



JOB-DESIGNED CONTAINERS FOR EVERY NEED can end your materials handling problems. Kennett Receptacles include roving cans, doffing trucks, mill boxes and trays. They are furnished in standard or special sizes in a wide variety of design modifications to fit every textile requirement.

NATIONAL CAN HELP YOU CUT COSTS TWO WAYS. If your problem is *safety* in materials handling, Kennett Receptacles by National can end it. For National Vulcanized Fibre is glossy smooth, resilient and long wearing—won't crack, dent or break, won't rust or corrode, won't damage delicate fabrics or expose them to damage. If your problem is *speed and efficiency*, National can help solve that too. A National Materials Handling Specialist is always available to help you adapt the broad Kennett Line of containers to your exact need. Simply write for our booklet, "Materials Handling for Textile Plants." Address Dept. **V-11.**

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Maintenance, Engineering & Handling

The Case Of The CTF-5B-139U

Parks-Cramer's New Multiple Outlet Air Distributor

This look at Parks-Cramer's newest attachment for its spinning frame cleaner tells of recent advancements in engineering techniques incorporated in the unit. In addition to explanations of the operation of the equipment, the article outlines minimum direct realized through use of the unit. spinning room labor savings which can be

THE Parks-Cramer Co. of Charlotte, N. C., reports that its new CTF-5B-139U multiple outlet air distributor has been developed to meet specific needs created by technological advances in spinning during recent years. Among the advances which pose greater cleaning problems in spinning are high drafts, coarser roving numbers, larger packages, increased production rates, redesigned creels and new drafting systems. All of these items, in one way or another, tend to create greater amounts of lint and fly or make cleaning of the equipment more difficult.

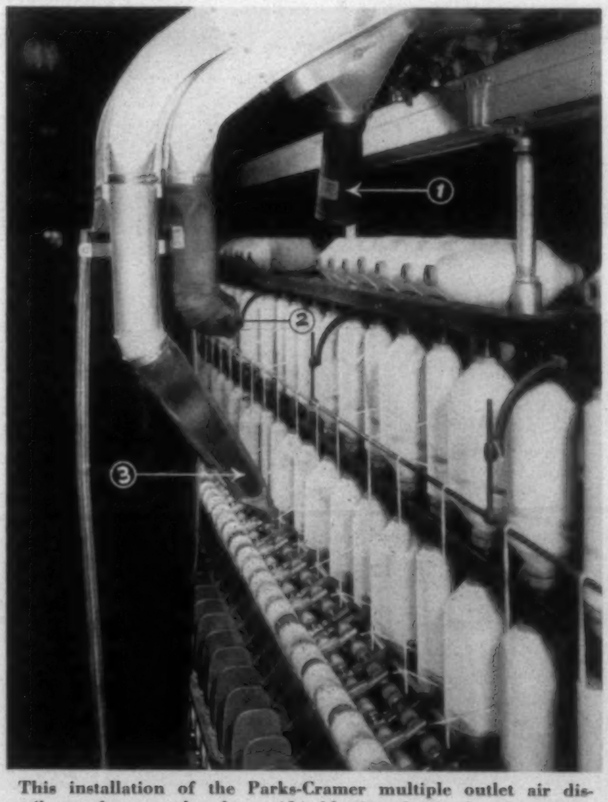
The multiple outlet air distributor allows deliverance of regulated velocities of air in specific areas. Gentle breaths of air may be delivered to the roving area in the creel and a healthy blast of air may be delivered in the roll beam and underframe areas by the same unit traveling the length of the frame.

Back Roll Area

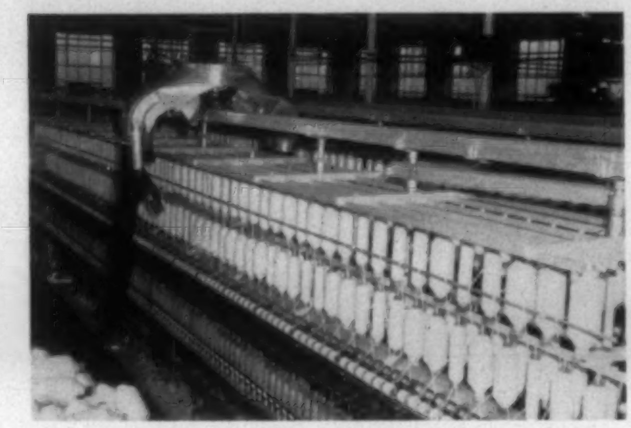
Following the development of the multiple outlet cleaner and underframe sleeve has been the introduction of an attachment for cleaning the area around the back steel roll. Need for automatic cleaning in this area became apparent as many mills began removing the flat or revolving clearers to save the cost of periodic hand cleaning and the cost of the clearer itself. The attachment directs air to this critical area by use of an aluminum elbow extension and flexible sleeve. It is positioned on the cleaning unit where a flexible sleeve to clean the lower level of a two-level conventional creel or the taper of the roving bobbin in an umbrella type creel was formerly mounted. Cleaning in this area is accomplished by use of an additional opening in the big flexible sleeve which cleans the underframe area.

A wire is hemmed into the outlet end of the sleeve which directs air to the back roll area. This has been done so that the outlet end can be formed to have a long slot-like shape about an inch wide. A long, narrow pattern of air is thus delivered to the long, narrow back roll area. This pattern permits concentration of air on the back rolls and keeps it out of the high drafting zone and off the revolving front clearers. If an air stream was allowed to strike this front revolving clearer, waste would be blown therefrom into the stock as it was being drafted. In addition, an air stream, with a degree of intensity, which enters the area between the front roll and drafting apron would tend to cockle the yarn or may even blow down the ends. This is true because stock in the area is in a sort of "floating" state and has practically no strength.

The advantage of pinpointing the direction of the air stream to a specific area as opposed to the older method of simply blowing air all over the frame is obvious. Proper amounts of air in specific areas requires several velocities. Any air stream covering the roving area must be modest in comparison to the amount necessary to clean the underframe area. The underframe area is, coincidentally, inaccessible to the older type frame cleaners. A regulated air stream is necessary for the best cleaning job. More lint



This installation of the Parks-Cramer multiple outlet air distributor features the sleeve (1) blowing down, the sleeve (2) blowing across the top taper of the roving in the upper section, and the back roll cleaning attachment and aluminum extension (3) dispersing air to the back roll area.



Reeves Bros. Inc., Mills Mill No. 1, Greenville, S. C., has installed Parks-Cramer multiple outlet air distributors over all of its spinning frames. Note the cleanliness of the frame and creel shown in this picture.

and fly, due to the previously mentioned technological advances and, in addition, to the more widespread usage of mechanically picked and gin-dried cottons, makes a good cleaning system imperative to efficiently run spinning.

Underframe Sleeve

Parks-Cramer's more efficient new underframe sleeve is quite a forward step in both design and in the material used in its construction. A seam running down the back side prevents the sleeve from standing away from the frame due to the force of air being blown from it. This action is similar in principle to the motive force found in jet aircraft. A blast of air from the rear pushes the plane in the opposite direction. The air stream directed toward the spinning frame trys to push the sleeve away from the frame. However, the force of this air stream is not sufficient to overcome the holding strength of the big seam down the back of the sleeve.

The sleeve is made of a plastic coated material which is supplied especially to Parks-Cramer for this particular use. The material resists lint build-up and provides toughness to make it long-lasting in mill operation. The blast of air issues from new molded rubber outlets attached to the sleeve. The rubber outlets are oblong in shape and extend about two inches from the sleeve to permit the air to have a direction which is horizontal to the floor.

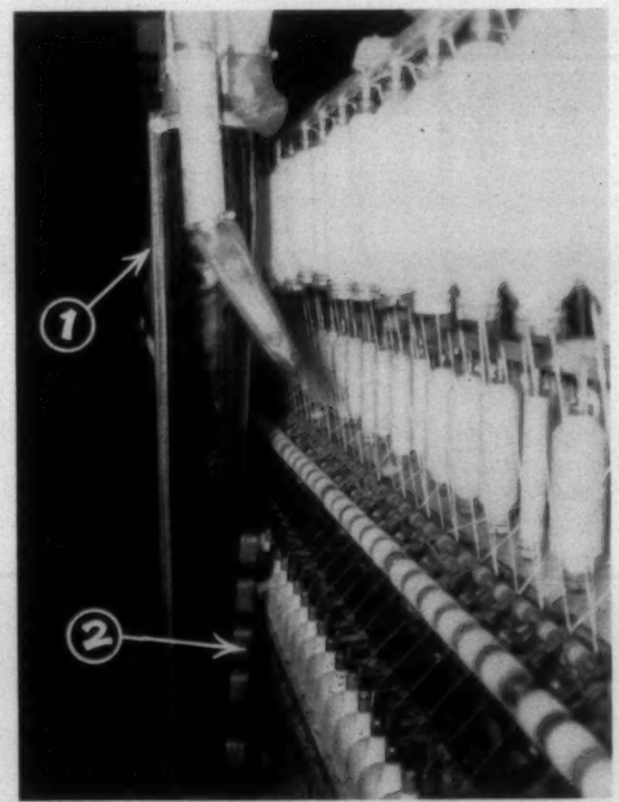
Sleeve Fastener

A stainless steel section, which is "square to round" in shape is used to fasten the sleeve to the air distributor. This new development replaces the older aluminum section that was riveted to the top of the flexible sleeve. Previously, when the sleeve was replaced the aluminum section had to be discarded also. However, now the stainless steel section is a permanent part of the air distributor even though it is attached to the distributor in the same manner as with the aluminum section. The flexible sleeve is fastened in place on the stainless steel section by means of a ring clamp instead of rivets. The sleeve may be replaced by loosening this ring clamp. Adjustment is made on the flexible sleeve's position by trimming fabric from the top until the sleeve is the desired length. Air is directed into the critical areas with a greater degree of accuracy in this manner.

Direct savings provided by the new back roll cleaning attachment may be seen by noting that the usual back roll cleaning frequency is once per week. With the back roll cleaner, the frequency of cleaning this area is usually extended to two or more weeks. Cleaning and "punching out" of the back steel rolls costs about 60 cents per frame per week (½-hour necessary to do the job at $1.20 per hour.) This cleaning amounts to $30.00 per year per frame. Cutting cleaning frequency in half saves, therefore, about $15.00 per frame per year. This figure is assumed to be the minimum direct savings which can be made.

Perhaps even more important than the savings in the direct spinning room labor aspect of the back roll cleaner is the improvement in yarn quality made possible by the use of the equipment. Hand roller picking and punching out in the back roll area is the cause of numerous slubs and other yarn imperfections. This is true due to the lint accumulations not being thoroughly removed but left floating in the back drafting zone. The accumulations oftentimes find their way into the stock as it is processed. The yarns which result are of a poorer quality to this degree.

Tests in one mill show a one-third reduction in filling slubs after installation of the cleaning attachment and the removal of the back roll clearers. The test was run on fabrics in the cloth room and slubs were marked as imperfections in the usual manner. In some cases, it is desirable to move a single, weighted, flat clearer from stand to stand around the frame to get additional cleaning benefits.



The heavy seam on the back side of the underframe sleeve (1) keeps the sleeve from standing away from the frame due to the action of air blowing from the molded rubber outlets (2). This sleeve is made of a plastic coated material which resists lint build-up and is tough enough to take the punishment normally dealt out in mill operation.

Georgia Mill Men Discuss Scheduling Of MILL MAINTENANCE

The Fall meeting of the Textile Operating Executives of Georgia was held in the Harrison Hightower Building, Georgia Institute of Technology, Atlanta, Sept. 28. Following the association's usual format, the answers of Georgia Mills and mill groups to questions submitted to them prior to the meeting were discussed in open forum. The following is a report on the discussion of questions pertaining to mill maintenance.

Question No. 1—What maintenance methods do you use for your humidifying system?

Mill B: We have one man who maintains our humidifying system and checks leaking heads, blows out air lines, etc., each day.

Mill D: We have the Bahnson system. The heads are removed annually and are inspected, painted and bearings greased. Atomizers in carding and spinning are maintained by the department personnel.

Mill E: We use the Parks-Cramer system in carding and spinning and the Bahnson system in the weaving. Heads are checked for leaking valves and the rim of the humidifier is cleaned with emery cloth at the spot where leakage may be occurring. This usually stops the head from leaking.

Mill F: We use a preventative maintenance schedule for cleaning and lubrication of our Bahnson system.

Mill H: We use maintenance charts which have daily and weekly items to do and check. Some items are inspected on a monthly or semi-annual basis.

Mill I: We change and overhaul all atomizers once each year. We make a regular inspection on all humidifiers, controls and make other repairs that are needed. We have a central maintenance program under the supervision of the machine shop.

Mill N: We have two men on the first shift and one on the second responsible for maintenance and repair of our humidifying systems throughout the mill. These men operate on a regular maintenance schedule and answer all repair calls for the mill. Repair calls are made on the third shift by shop personnel. As part of the maintenance program, each head is disassembled, cleaned and rebuilt if necessary. This cycle is continued on an annual basis.

Mill O: We have a maintenance crew to care for our humidifying systems. These men work by a schedule. All heads, controls and other elements are checked on a specific date.

Mill P: We have eight central station systems and supplementary atomizers are used in the weave room. If a leaking head is found it is first cleaned. If this does not correct the condition the head is removed for replacement of worn parts.

Mill T: We have one man per shift who is responsible for the entire mill humidification system. He has a check list of duties to perform and a frequency for each of these duties. This list includes visually inspecting atomizer heads for proper operation, cleaning and inspecting controls, inspecting and servicing central station apparatus, changing control box filters, etc. In addition to the listed routine duties, the maintenance man also answers work orders which are brought down from the various departments. These order blanks have appropriate spaces for: (1) name of the department; (2) the type of trouble needing attention; (3) the time the order was written; and (4) the supervisor's signature.

Mill U: Each individual department maintains its own humidification system with the exception of replacing water lines and air lines. These duties are performed by machine shop personnel.

Question No. 1 (a) and (b)—What type of humidifying system do you have? How do you stop a head from leaking?

Mill B: We have Bahnson-type heads, atomizers and washed air in combination with a central station. Our humidifier man takes the head off the system when it begins to leak and replaces it with a spare head. The leaking head is overhauled in the shop.

Mill D: We have atomizers in the carding department and in a portion of the spinning department. We have Bahnson heads in the remainder of the spinning area and in twisting, weaving and the cloth room. We find that most of the leaks are due to a lack of proper cleaning.

Mill G: We have conventional atomizers and repair leaking heads by taking off and replacing with a spare.

Mill H: We have Bahnson humiducts and heads and the American Moistening system. We keep the openings in the Bahnson ducts clean at all times and keep the disks clean in the Bahnson head at all times.

Mill I: We have the Parks-Cramer, air change and gradumatic systems. Leaking atomizers are replaced with overhauled ones. The defective parts of the leaking unit may then be repaired in the shop.

Mill J: We have the American Moistening Co. system and fix leaking heads by cleaning thoroughly and replacing worn parts.

Mill N: We have the American Moistening Co. atomizer system. Preventative measures are taken such as draining the air lines of water daily, on schedule. This schedule is varied as weather conditions demand. When specific heads are leaking, we drain appropriate lines and clean the atomizer. If the unit is still troublesome, it is removed, disassembled, cleaned and rebuilt before replacing.

Mill O: We use atomizers and ducts. If there is a loose connection, we try to stop leaking heads without taking them from the line. If it is necessary to take the head off for a complete overhaul we replace it with a new or rebuilt one.

Mill Q: We have atomizers and remove faulty or leaky heads for repair in the shop. We test the head before it is put back into service to make sure that it operates properly.

Mill S: Our system consists of Bahnson Humiducts, Industrial Air and American Moistening equipment. We remove atomizer head from the lines, clean, adjust and return to operation.

Mill T: We use a combination of American Moistening air change, American Moistening straight atomizer, Parks-Cramer H.D.D. humidifiers and Carrier Corp. central station with refrigeration. When we find a leaking or otherwise defective head that cannot be corrected by cleaning, we remove it from the line and rebuild it in the shop. The rebuilt head is tested before returning to service.

Mill U: We have the American Moistening system and Carrier Corp. air wash. We check the level of the water box and the angle of the head when we find a leaking head. We find that leaking usually comes from these two sources.

Question No. 1 (c)—How do you eliminate condensation in your compressed air line?

Mill B: We use an after cooler and separator.

Mill D: Condensation in the air line has not been eliminated. We open the valve on the end of the line and blow out once per shift.

Mill F: We use traps, drip tanks and periodic bleeding.

Mill G: Air is run through an after cooler and separator. Automatic traps are installed at both ends of each branch line to separate moisture from air. Each main supply line has a trap at the end.

Mill H: We use traps and filters to eliminate condensate.

Mill I: We have Poro-stone air filters on our main air lines with automatic moisture traps. The water which is not taken out is drained each day.

Mill J: We drain air lines two or more times each eight-hour shift.

Mill L: We bleed air lines to remove condensate.

Mill N: We use after coolers and traps but find that this has not entirely eliminated the problem. We are experimenting with different type traps.

Mill O: We use an after cooler at the compressor and also use filters with drip legs throughout the various lines in the plant.

Mill P: We use after coolers at the compressors and traps in the receiver tanks.

Mill Q: We use a shop-built air line filter trap.

Mill S: The problem has not been eliminated. We have a schedule of blowing out accumulators and ends of lines.

Mill T: Condensation in air lines is still a problem with us. We try to keep our after coolers and moisture separators in good condition, first of all, then we use air line filters ahead of controls and other critical equipment.

Mill U: We have an after cooler on our compressor. We also use traps for instrument air lines. In extreme cases we insulate air lines.

Question No. 1 (d) and (e)—How do you keep your humidifier lines clean? Do you use a chemical? If so, what kind, how much and how often? What is your cleaning frequency? (d) Do you have trouble with rust in your humidifier lines? What is the pH range of your water? Have you used a rust preventative? If so, what kind and how much?

Mill D: We have gravel in the filter tank through which the water passes. Tank and gravel are cleaned once per year. We do not use a chemical and have very little trouble with rust in our humidifier lines. The pH of our water is 8.6. We have not used a rust preventative.

Mill E: Our water is treated with a rust preventative known as Rustang. We use six pints of Rustang added to a container which is regulated to drip for 24 hours. The Rustang keeps the humidifier lines free of rust. We have no record of the pH range of water.

Mill F: We treat our water with approximately one quart of Algor per day. The pH of our raw water is 6.9.

Mill H: We keep our lines clean by maintaining strainers in place and keeping them clean. We have very little trouble with rust in the lines. The pH of our water is 8.4. We use a pint of rust preventative known as Fluf-fo every 24 hours. We find that the best maintenance method is cleanliness.

Mill I: We keep our lines clean by wiping and brushing once per week. We have not used a rust preventative and our range of pH is 8.0 to 9.0.

Mill J: We do not have any rust trouble. Our water is on alkaline side and we try to neutralize. We have our own deep well. The water is hard and we treat to soften.

Mill N: We mop humidity lines daily with dry mops. Each department is responsible for its own lines. We have not had much trouble caused by rust in the lines. The pH of our water is 7.5 to 7.8. We have not used a rust preventative.

Mill O: We have used various types of chemicals without success. We clean our water boxes each week. Cleaning of lines is almost a continuous operation. We have tried rust preventatives without much success. The pH of our water is 7.6.

Mill P: Atomizer lines are flushed each day. We do not use a chemical in the water lines. We have not had trouble with rust in the water lines. The pH range of the water is 7.3 to 7.8. We do not use a rust preventative.

Mill Q: We do not have trouble with rust nor do we use a chemical in our water lines. Our pH is 7.2.

Mill S: We clean our humidity lines on a weekly schedule but have no way of cleaning them internally. We have some rust in our lines but not enough to cause trouble. Our pH ranges from 7.4 to 8.4.

Mill T: We have very little trouble with rust and use no chemical or rust preventative in our lines.

Mill U: We do have some trouble with rust. We replace lines when they become filled with rust. Our water has a pH range from 6.7 to 7.0. We do not use a rust preventative.

Question No. 2—What is your floor maintenance schedule? What is your cost per 1,000 square feet of floor space for Tennant-type finishing?

Mill D: We have not applied any type finish to our floors. We scrub weekly and repair when a bad condition is located.

Mill E: Our estimated cost of sanding and sealing floors is $100 per 1,000 square feet. We hope to buff and apply finisher once each year but have no cost figures on this as yet.

Mill J: We scrub in carding and weaving departments. We have only a small area in the finishing department on which we have used a floor finish.

Mill O: We rework our floors completely once each year. We go over all floor space with steel wool and apply a new seal. Where excessive wear is present, we sand, seal, steel wool and then seal again. We tone our floors about 12 to 15 times a year. Our cost per 1,000 square feet is approximately $10.

Mill R: Our floors are buffed with steel wool every two months. After the fourth buffing, a light coat of heavy-duty finish (Tennant No. 101 Gloss) is applied. The area under machines is painted once a year with a gray lacquer. The cost per 1,000 square feet for finishing is $100. This includes cleaning and painting under all machines, sanding and complete finishing.

Mill S: We try to cover the entire plant once a year. Our cost per 1,000 square feet for the year 1956 was $63.79.

Mill T: We are sanding and sealing the floors in our mill at the present time and do not have any accurate cost figures as yet. We have two men doing this work and plan to finish all the floors room by room.

Question No. 3—Please discuss your methods relative to cleaning and replacing tubes for fluorescent lights.

Mill D: The maintenance department replaces bad tubes weekly. The cleaning is done by each department and is also done weekly. Fluorescent fixtures are washed annually with soap and water.

Mill G: We make a weekly check to find and replace burned out tubes.

Mill I: Each department cleans its own lighting fixtures, Tubes are checked and replaced on a daily basis.

Mill J: All fluorescent fixtures are cleaned regularly by respective departments. Tubes are replaced by the maintenance department when they are burned out.

Mill L: Reflectors and tubes are cleaned on a yearly basis. We have a three-week replacement schedule.

Mill N: In most of our departments, the lamps are cleaned daily and replaced as needed. We are experimenting with replacing lamps in groups but our experience is too limited to give any accurate results.

Mill O: We have a two-man maintenance crew for our fluorescent lights. All fixtures are checked each morning

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Improved yarn Quality

USE R+F NITRIDED SPINNING and TWISTER RINGS

TEXTILE SUPPLIES
W D
USED MACHINERY

Watson & Desmond
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and any that are found out of order are repaired. These men clean fixtures for the remainder of the shift.

Mill P: Lights are checked weekly by the night-shift electrician. Burn-outs are replaced. Each department cleans its fixtures using a rolling scaffold.

Question No. 3 (a)—Have rapid-start type fluorescent fixtures been satisfactory in your mill?

Composite answer: Yes—5; No—1; Do not use—4.

Question No. 3 (b) and (c)—Where fluorescent lighting has been installed in spinning and weaving: (1) What foot-candle level is considered adequate? (2) What type fixtures do you use? (3) Are they parallel or at right angles to frames? What is your opinion of the slotted reflector-type fixtures?

Mill E: We use rapid-start fixtures with two 40-watt tubes. They are parallel to the frames. We do not think that the slotted fixtures are needed.

Mill G: Our level of lighting when first installed was 40 foot-candles. We use open, enamel-shade fixtures which are set at right angles to the frames. We feel that the slotted fixtures require less cleaning.

Mill I: We use fixtures with two 40-watt tubes. The fixture is parallel to the frame.

Mill J: We use Sylvania and General Electric 48-inch and 96-inch fixtures which are set parallel to the frames and looms. We only use slotted fixtures in the office and do not think they would be satisfactory for mill use.

Mill L: The level of our lighting is 25 foot-candles. We use a three-tube fixture which is 48 inches long and is set parallel to the spinning frames.

Mill N: The level of our lighting is 50 foot-candles on both white and colored goods. Our Sylvania HF-100 fixtures are set at right angles to our looms and parallel to our spinning frames. Our experience with slotted fixtures has been good.

Mill O: Our foot-candles run from 15 to 25 in spinning and weaving. In spinning we use fixtures with two 40-watt tubes which are 48 inches long and are set parallel to the frames. In weaving we use four 40-watt tubes which are 96 inches long and are set at right angles to the looms. We have had very limited experience with slotted fixtures but believe they are a good idea.

Mill P: The 26 foot-candle level of light we have in the weave room is apparently adequate. We have three-tube 40-watt fixtures in the weave room which are parallel with the looms and are centered over the weaver's alleys.

Mill S: We think that 35 foot-candles for spinning and 60 to 75 foot-candles for weaving adequate for white goods. We use several makes including Sylvania, Mitchell, Benjamin, Westinghouse, Wheeler and Day-Brite. Some of the fixtures over our spinning are set at right angles and some are parallel to the frames. The fixtures over our weaving are parallel with the looms. We do not have the slotted reflector-type fixture but plan to go to them in the future.

Mill T: We use both continuous row lighting and individually hung fixtures, both open and closed end. We have both four-foot and eight-foot fixtures. The fixtures are set mostly at right angles to our frames.

Mill U: We feel that a level of 50 foot-candles is adequate. We use two 40-watt tube fixtures with both open and closed ends. The fixtures are set at right angles to the frames.

Question No. 4—Who takes care of maintenance between overhauling periods? Do you have a maintenance crew? Are fixers responsible for this work?

Mill D: Each department is responsible for the overhauling and maintenance of its equipment.

Mill E: Fixers handle machine maintenance between overhauling.

Mill F: Maintenance of production machines is handled by production fixers.

Mill H: Maintenance between overhaulings is taken care of by our fixers. We have overhauling crews which do the major part of our maintenance work in each department. The fixers are responsible for only minor maintenance between overhaul periods.

Mill J: Regular fixers take care of all maintenance and overhaul on equipment in their departments.

Mill N: Generally, our fixers are responsible for maintenance between overhauling periods. However, if it is a large job that would require too much time, either the overhauling crew or the shop is called in for assistance. We have a maintenance crew in the card and spinning rooms at all times. We have men in the weave room that we use to form a maintenance crew when needed for such items as motorizing, moving looms, etc. This is not regular routine. About the only regular work the weave room overhauling crew does is the replacement of loom sides as needed. Fixers are responsible for general maintenance between overhauling periods.

Question No. 4 (c) and (d)—How often do you inspect the following: (1) pickers; (2) cards; (3) drawing; (4) roving; and (5) spinning? Do you use maintenance forms to be filled out by the persons inspecting the machinery?

Mill F: Our machinery is thoroughly inspected when overhauled annually. Other inspections are of a continuous and general nature and are made by section men, shift supervisors, overseers and the superintendent. We use forms on the annual overhauling and inspection of all machinery.

Mill H: Our inspection schedule includes: (1) pickers—two pickers per week with semi-annual overhauling; (2) cards—one card per day with a grinding schedule every nine days on cylinder and doffer and every 18 days on flats; (3) drawing—overhaul three frames each day and inspect every frame each day; (4) roving—inspect eight frames each week and overhaul every three months; and (5) spinning—fixers inspect spinning frames on a 90-day schedule and these frames are overhauled every six months. We use maintenance forms which are filled out and signed by the person making the inspection.

Mill N: Our maintenance department does not do any inspecting on machinery from picking through spinning. This work is handled by fixers who follow an overhauling schedule. If the fixers discover anything in their normal oiling and fixing routine, they call it to the overseer's attention. The overseer then decides whether or not to overhaul at that time. We use maintenance forms in carding and spinning for overhauling but not for inspecting.

Mill O: We inspect our pickers every ten weeks. Our cards are not inspected on a regular schedule other than at the time of grinding. Other inspection periods include drawing every six weeks; roving every 26 weeks; and spinning every 24 weeks. We use maintenance forms.

Mill U: Our machinery is inspected as follows: (1) pickers, every eight weeks; (2) cards, every four weeks; (3) drawing, every six weeks; and (4) roving, every six months. We use maintenance forms.

Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

Paul A. Wilson

Paul A. Wilson has been appointed sales manager of the Greensboro, N. C., Divison of Draper Corp., Hopedale, Mass. Mr. Wilson, a graduate of Wofford College, joined the company in 1943 and served as a member of the Spartanburg, S. C., sales force. In 1953, he was appointed assistant division sales manager of the Greensboro office, a position he held until the time of his promotion.

E. H. Kittredge Jr., vice-president of Texize Chemicals Inc., Greenville, S. C., has been named the No. 1 chapter president in the U. S. by the Society for Advancement of Management. The immediate past president of the Greenville Chapter, Mr. Kittredge was honored at a meeting of the national directors of S.A.M. in New York City where he received the annual President's Award from the group's national president. The award is made to the chapter president whose group makes the greatest increase in activity during a year and whose chapter is judged the best operated.

Rupert S. Jones has been named vice-president of operations at Courtaulds (Alabama) Inc.'s LeMoyne plant. He succeeds Richard S. Thomas, who has resigned his post to return to England as manager of the Wolverhampton plant of Courtaulds Ltd. Mr. Jones comes to his new responsibility in the U. S. from Courtaulds Ltd. in England where he has served since 1948 as manager of the plant in Preston, which is actively concerned in the commercial development and large-scale production of high tenacity viscose rayon yarns. He holds a master of science degree from Liverpool University.

The board of directors of West Point (Ga.) Mfg. Co. has created two new executive vice-presidential positions and elevated a long-time employee to a new post as vice-president. T. Scott Avary was named executive vice-president in charge of finance, Herman D. Ruhm Jr. was made executive vice-president in charge of sales and Lee Tillery, former manager of the Fairfax Division, was elevated to the newly-created post of vice-president in charge of operations. . . . Mr. Avary, a native of West Point who has devoted almost his entire business career to the company, is also vice-chairman of the board of Wellington Sears Co., New York City, a textile sales agency which is a subsidiary of West Point. He was named vice-president of West Point in 1952 and in 1955 was made president and later vice-chairman of Wellington Sears Co. . . . Formerly president of Burlington Industries, Mr. Ruhm joined the West Point organization in May of this year as president of Wellington Sears Co. He had previously been president of Bates Mfg. Co. In recent actions by stockholders, Mr. Ruhm was named a member of the boards of directors of West Point Mfg. Co., Wellington Sears Co., Dixie Mills Inc., Columbus Mfg. Co., Equinox Mill, Wellington Mills Inc. and Cabin Crafts Inc. . . . Mr. Tillery was man-

MAMMA AND THE KIDS—Last month the Graniteville Co. at Graniteville, S. C., which has been in business since 1845, paused to pay tribute to some of its employees of long standing. Heading the list were two members of a family which can look back over 250 years of service with the company. William Henry Carpenter and his sister Mrs. Annie C. Faulkner, both 50-year veterans with the firm, brought with them a very special guest—their mother—who presently has five sons and three daughters working for the company. (Another son formerly worked for the company but is now an employee of the Graniteville Post Office.) This present generation includes, in addition to William and Annie, brothers Jesse (Bit), Charles (Doc), Hubert (Speed) and Denzil; and sisters Bessie and Ruby. Preceding them at the Graniteville Co. were their father and their grandfather. William and Annie are shown above receiving their 50-year awards from Samuel H. Swint, president of the company, while 82-year-old Mrs. Carpenter looks on. *(Photo by Flo Shoemaker, editor, Graniteville Bulletin.)*

ager of the Fairfax Division before his elevation to the new position as vice-president in charge of operations. Mr. Tillery joined the Fairfax mill in 1922, was made assistant manager of that mill in 1933 and became manager in 1947.

A. L. Freedlander

A. L. Freedlander, chairman of the board of Dayton Rubber Co., has been named a Knight of the Royal Order of St. Olaf — the highest honor the country of Norway may bestow upon a civilian. Mr. Freedlander was cited for his contribution to the industrial progress of Norway over the past 25 years and for helping Norway to help itself. He has been with Dayton Rubber Co. since 1919 when he joined the company as chief chemist and factory manager. He became president of the company in 1936 and moved up to chairman of the board on September 1 this year.

Edwin M. Penney has been appointed manager of textile sales for the fiber glass division of Pittsburgh (Pa.) Plate Glass Co. In his new position Mr. Penney will be responsible for sales and sales planning of fiber glass textile products, including yarn, rovings and related products. Prior to his appointment he had served as manager of quality control, textile sales, since joining the company in 1953.

W. H. Oswald has been elected vice-president of the Alvey Conveyor Mfg. Co., St. Louis, Mo. Mr. Oswald has been with the company for 34 years. During that time, he has served in many departments and activities. As vice-president, he will continue supervisory functions in sales and service divisions with special emphasis on correlating and integrating all operations in such a way as to make the company's services more effective.

Fred C. Grant

Fred C. Grant has been appointed vice-president and director of sales for Crown Chemical Corp., Providence, R. I. Mr. Grant has been with Crown since 1952. Prior to that he was for many years with General Dyestuff Co., where he was instrumental in sales development of that firm's textile chemical division.

Albert E. Cleghorn has been named to succeed Donald G. Rogers who has retired as president of National Aniline Division, Allied Chemical & Dye Corp. Mr. Cleghorn has been executive vice-president of the division since 1954. He joined Allied Chemical in 1933 and served on its headquarters staff. In 1952 he was assigned to the National Aniline Division as assistant to the president and vice-president. . . . Mr. Rogers joined National Aniline in 1917. He holds numerous patents in the field of anthraquinone chemicals and dyes. Mr. Rogers has held various technical and management positions within the division. He was named general manager in 1945, vice-president in 1947, executive vice-president in 1950 and president in 1951.

John T. Castles has been appointed sales manager for the silicone products department of the General Electric Co. Formerly manager of rubber market development, Mr. Castles succeeds Jerome T. Coe who has become the department's marketing manager.

R. Halbert Webb, formerly head of dyeing and finishing at Massachusetts Mohair Plush Co. Inc., Neisler Mills', Margrace Mills, Kings Mountain, N. C., has accepted a similar position with Morgan Mills Inc., Laurinburg, N. C. He has been associated with Neisler Mills since 1930.

George Asnip has been promoted to vice-president of Abbeville (S. C.) Mills Corp. and the worsted division of Excelsior Mills Inc., Pendleton, S. C. Mr. Asnip has been general manager of the worsted division since 1955 and treasurer of Abbeville since 1956.

Frank H. Cotton, formerly vice-president in charge of sales at Product Sales Inc., Whitman, Mass., has joined with Raymond L. McCauley, formerly Southern sales manager for the same company, in establishing a new general sales agency handling textile equipment and accessories, and are operating under the name of Cotton-McCauley & Co. Inc., Pawtucket, R. I. The new firm has been appointed exclusive selling agents for the products of Machinecraft Inc., Whitman, Mass., which will continue to manufacture products known to the trade as Cleanalign Saddles, Climax and Cleandraft Top Rolls, Easi-Creel and Flexing Changeover. Future expansion plans include the development and manufacture of other allied textile equipment and accessories.

Frank H. Cotton

R. L. McCauley

J. Hugh Bolton, president, and E. M. Kennedy, export sales manager, Whitin Machine Works, have left on a sales and inspection tour of important textile centers in South America. Their first stop will be at Medellin, Colombia, where they will participate in the 50th anniversary ceremonies of the Cia Colombiana de Tejidos Coltejer Co., at which mill they will also witness the starting up of a new 10,000-spindle Whitin spinning installation. They will then visit mills in Santiago, Chile, and Buenos Aires, Argentina. En route home they will spend some time in Sao Paula, Brazil, visiting the Whitin Sales Agency, Eduard Seelig & Cia., Ltda., also inspecting customers' mills in that area and studying trends in the textile industry of Brazil.

Ben O. Merritt Jr.

Ben O. Merritt Jr. of Greenville, S. C., has joined A. E. Staley Mfg. Co., Decatur, Ill., as a technical representative for the textile industry. Prior to joining Staley, Mr. Merritt served as assistant manager and overseer in several textile mills. His new headquarters will be Staley's branch office in Atlanta, Ga. A graduate of North Carolina State College, Mr. Merritt received a B. S. degree in textile management. He has been an overseer in the Georgia Duck & Cordage Mill, Scottdale, Ga., and the Judson Mills, Greenville, S. C. Mr. Merritt came to Staley from Gate City Yarns Inc., East Point, Ga.

Paul Luck has joined Ciba Co. Inc. as special assistant to the general sales manager. Mr. Luck is well known in the dyestuffs field, having been for several years the Metropolitan district sales manager for the Calco Division of American Cyanamid Co. and, more recently, vice-president and general manager of Peerless Color Co. During his dyestuffs career, Mr. Luck has been active in the A.A.T.C.C., having served as chairman of the New York Section and being presently a member of the publications committee. He is also a member of the textile advisory board of Fairleigh Dickinson College.

Ernest C. Hungate has been named industrial air conditioning product specialist for the machinery and systems division of Carrier Corp., Syracuse, N. Y. Mr. Hungate has been serving in the application engineering department for the division, spearheading development of the new Rotaspray Weathermaker. Work towards development of this unit began in 1946 when Mr. Hungate joined Carrier at its Atlanta office, which handles a substantial amount of textile mill air conditioning.

J. C. (Bud) Shaw Jr., formerly of Crown Cotton Mills, Dalton, Ga., has joined the Rocky Creek Mills Inc., Turnersburg, N. C., as manager. The plant manufactures synthetic yarns for the tufted textile, upholstery and drapery industries. Mr. Shaw was with Crown for six years. He is a 1910 graduate of Georgia Tech and a member of Phi Psi, national textile honorary fraternity.

Louis F. Laun

Louis F. Laun has been appointed general merchandising manager of the textile division, Celanese Corp. of America. For two years previously, as director of advertising for Burlington Industries Inc., Mr. Laun had been in charge of that corporation's advertising and of co-ordinating staff marketing and out-of-town sales office activities. Between 1946 and 1955, he worked for Bates Mfg. Co., in New York and Lewis-ton, Me., successively as assistant advertising manager, public relations director, labor relations director and assistant to the president. Mr. Laun will assume his new post with Celanese on December 1. He succeeds Paul D. White, resigned.

Noel E. Garvin, former assistant division manager of Burlington Industries' Brighton Division, Shannon (Ga.) Plant, has been named plant manager of the company's Cascade Plant, Mooresville, N. C. Mr. Garvin joined the company in 1947 at the Newton, N. C., plant and held positions at Cramerton, N. C., and at Cascade before going to Shannon in 1955. . . . Woodrow Tew, who had been in Burlington's Greensboro offices in development and technical assignments, is being moved to the Cascade plant by the company as general supervisor of the preparatory department. He has been with the firm since 1935 and held various supervisory positions before moving to the Greensboro office.

Oakite Products Inc., manufacturer of industrial cleaning, sanitizing and metal treating compounds, has announced that Vern M. Coulson, for 13 years the company's representative in Evansville, Ind., has been transferred to Fort Worth, Tex.

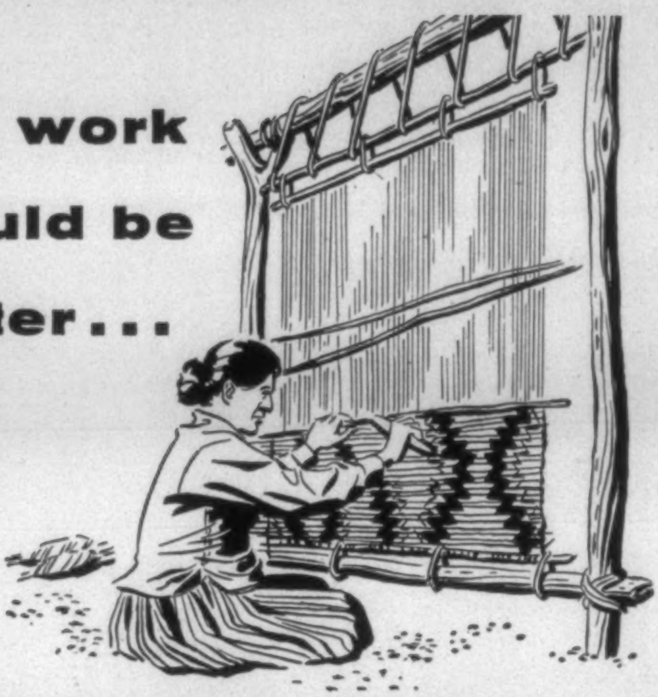
J. R. Carlson has been appointed to the newly-created position of sales manager of Jefferson Chemical Co. Inc. At the same time announcement was made of the appointment of P. R. Monaghan as Eastern regional manager. Both appointments were effective November 1. All regional managers and the manager of Jefferson's alkali sales division will report to Mr. Carlson. He will be located at the company's headquarters in Houston, Tex. Mr. Carlson, a 1940 graduate of Columbia University, has been Jefferson's Eastern regional manager since 1956. He joined the company in 1951.

Irving S. Bull

Irving S. Bull has joined Roberts Co., manufacturer of spinning frames, Sanford, N. C., as research engineer. Mr. Bull was formerly staff engineer in the mechanical department of Firestone Textiles Inc., Gastonia, N. C. Prior to that he was an engineer with J. P. Stevens & Co. Inc., Greenville, S. C. A graduate of Georgia Tech, Mr. Bull holds degrees in both electrical and mechanical engineering.

Expansion of The Dow Chemical Co.'s textile development group has been announced by O. R. McIntire, technical director of Dow's textile fibers department at Lee Hall, Va. Harry E. New, formerly with American Viscose Corp. and the Chemstrand Corp., has joined Dow and now heads up textile yarn and fabric development in the textile development group. Other additions include the appointments of Hal E. Brockmann, formerly with Stonecutter Mills Corp., Spindale, N. C., and David M. Clark, formerly with Chatham Mfg. Co., Elkin, N. C., both of whom are working under Mr. New in yarn and fabric

Her work would be better . . .



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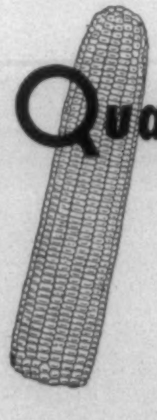

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development. . . . Robert L. Burgess, formerly with Burlington Industries at Burlington, N. C., and Charles R. Sheehan, Hockmeyer Bros. Inc., Lowell, Mass., have recently joined the group's dyeing and finishing section.

John N. Gregg, who graduated from the North Carolina State College School of Textiles in 1955 with a Bachelor of Science degree in textile engineering, has joined American Viscose Corp., as a technical sales representative. Mr. Gregg will make his headquarters in the company's Charlotte, N. C., office.

C. C. Campbell

Clarence C. (Bob) Campbell has been named manager of textile chemicals by the Pennsylvania Industrial Chemical Corp., Clairton, Pa. He will supervise textile industry projects at the company's sales-service laboratory and will co-ordinate technical service through the sales offices. A graduate of the University of Pennsylvania, Mr. Campbell has been with Collins & Aikman Corp. where he organized and managed a new foam rubber laboratory.

At the October meeting of the board of directors of the American Textile Machinery Association two new officials were elected to fill vacancies. F. Gorham Brigham Jr., treasurer of Saco-Lowell Shops, Boston, Mass., has been elected treasurer of the association to succeed Samuel F. Rockwell, president-treasurer of Davis & Furber Machine Co., and J. H. Bolton Jr., vice-president and director of sales, Whitin Machine Works, Whitinsville, Mass., has been named chairman of A.T.M.A.'s exhibition committee. Former chairman of this important committee was W. K. Child, vice-president, Draper Corp., Hopedale, Mass., who is now vice-president of A.T.M.A.

D. F. Greene has been appointed to the home office market development division of Addressograph Distribution, Addressograph-Multigraph Corp., Greensboro, N. C. Mr. Greene joined the firm in 1938 in a sales capacity at Charlotte. Since that time he has specialized in addressograph systems and methods for the textile industry. In his new post he will concentrate on developing the most efficient and economical textile paperwork automation.

Herbert L. Werner, founder and senior partner of Werner Textile Consultants, has been appointed to the research advisory committee of the Textile Research Institute by Walter Regnery, president of T.R.I. and president of Joanna (S. C.) Cotton Mills Co. Mr. Werner's appointment represents an increase voted by the board of trustees in the maximum number of committee members, in order to bring to the committee people whose textile fields are not represented among its membership. He will serve for a term of three years, starting at the committee's meeting of Jan. 10, 1958. At this time, Dr. Wayne A. Sisson of American Viscose Corp., who is now vice-chairman, will assume the chairmanship of the committee.

L. D. Terry has been named sales engineer in South Carolina for the American Moistening Co. of Cleveland, N. C., and Providence, R. I. Mr. Terry, who attended Georgia Tech and has been with AMCO for 15 years, is being transferred from Atlanta to the company's Southern plant headquarters at Cleveland.

Lawrence L. Shailer Jr. has been appointed to the newly-created position of manager of textile chemicals sales development for B. F. Goodrich Chemical Co., Cleveland, Ohio. In his new post, Mr. Shailer will be responsible for promoting and coordinating the sale of company products—excepting fibers and color pigments—to the textile industry through existing departmental sales groups.

William F. Dolan Jr., has been appointed technical sales representative in North Carolina and the eastern part of Tennessee by the Nopco Chemical Co.'s industrial division. A graduate of Alabama Polytechnic Institute, Mr. Dolan has been with the company's textile chemicals division since 1955. In his new position he will be handling sales of the company's complete line of processing chemicals.

W. L. Dallas

W. L. Dallas, formerly superintendent of the Southside Plant, Abney Mills, Anderson, S. C., has been named assistant to C. C. Roberts, general superintendent of Borden Mills Inc., Kingsport, Tenn.

T. E. Hazell Jr. has been appointed sales manager of the intermediates department, organic chemicals division, American Cyanamid Co., New York City. Mr. Hazell is a graduate of the University of Florida and joined the company upon his release from service in 1946. Since that time he has held numerous sales and purchasing posts with the company.

J. S. Mather Jr. has been appointed director of sales for the Textileather Division of the General Tire & Rubber Co., Toledo, Ohio. Mr. Mather, a veteran of 25 years service with the division and since 1946 its general sales manager, succeeds Gerald H. McGreevy who has retired. Mr. Mather joined Textileather as a salesman and worked in sales in the field. He moved through various posts in the product manager's group and the sales promotion and advertising group at the division's headquarters.

C. W. Walter has been elected vice-president in charge of mechanical sales and T. A. Burdeshaw has been named vice-president in charge of engineering by Southern States Equipment Corp., Hampton, Ga. Mr. Walter, who is a graduate of Alabama Polytechnic Institute at Auburn, joined the company in 1945 and has held the position of sales manager for the mechanical division since 1946. Mr. Burdeshaw joined the company in 1941 as an inspector and has held positions as sales manager for the electrical division and engineering manager.

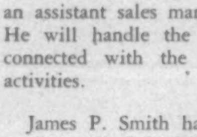
Charles C. Frye Sr., has been named superintendent of the Stonewall (Miss.) Division of Erwin Mills Inc. Mr. Frye has a degree in textile manufacturing from Clemson College and comes to Stonewall from Dan River Mills, Danville, Va., where he has had a wide experience in the manufacture of all kinds of textile fabrics.

Lewis R. Waddey has been named branch manager of the Chattanooga, Tenn., sales office of General Dyestuff Co., a sales division of General Aniline & Film Corp., New York City. Mr. Waddey succeeds H. Alison Webb who was recently appointed assistant sales manager by the General Dyestuff Co. A sales executive at the Charlotte, N. C., branch of the company for the past 25 years, Mr. Waddey is widely known throughout the South. He earned his B.S. degree in textile chemistry at Georgia Tech in 1930.

Walter A. St. Clair, assistant sales manager of the Hyster Co.'s former Eastern division, has been named assistant sales manager of the newly-created industrial truck division and will work directly with all domestic dealers in the nationwide wholesale organization. . . . James N. Rector, former manager in the Southeast district for the company has also been made an assistant sales manager of the division. He will handle the administrative duties connected with the new division's sales activities.

James P. Smith has been added to the service staff of the Whitin Machine Works, Whitinsville, Mass., and will work out of the company's Spartanburg, S. C., office. He will service Whitin woolen and worsted installations throughout the Southeastern territory. Mr. Smith attended Lowell Textile Institute and graduated from Pennsylvania State Teachers College with a B.S. degree. He has had a long connection with the textile industry, having been resident manager, superintendent and assistant general manager of various mills in New England.

Samuel A. Mansfield has resigned as manager of the Celco Plant of Celanese Corp. of America, Narrows, Va., a position he had held since 1949. Mr. Mansfield, who reports he has no plans for the future, had been with Celanese since 1923.


T. C. Smotherman

Thomas C. Smotherman, vice-president and sales manager of American & Efird Mills Inc., Mount Holly, N. C., has been elected president of the Durene Association of America for 1958. Mr. Smotherman succeeds Donald A. Jonas, vice-president of Spinners Processing Co., Spindale, N. C., a division of Johnston Mills Co., Charlotte, N. C. Other officers elected include B. Everett Jordan, secretary-treasurer of Sellers Mfg. Co., Saxapahaw, N. C., vice-president; and Joseph P. Holt, president of Aberfoyle Mfg. Co., Philadelphia, Pa., treasurer. A. C. Layton Newsom was reappointed executive secretary.

W. A. (Doc) Doyle has retired as cloth room overseer at the Milstead (Ga.) Plant of the Pineview Division of Callaway Mills Co. after 41 years of continuous service with Callaway. He joined the company in 1916 and was named cloth room night overseer in 1917. He was promoted to cloth room overseer in 1921, remaining in this capacity 37 years.

George W. Hammer Jr., has been named assistant director of personnel and industrial relations for Erwin Mills. Mr. Hammer was formerly associated with the American Thread Co., with whom he worked for about seven years in various capacities in Tennessee, North Carolina and New York City. He then joined Burlington Industries in Greensboro, N. C., and was there until joining Erwin.

David Taylor has been appointed manager of manufacturing, textile division, Celanese Corp. of America. He succeeds Louis F. Prossen, who was recently appointed assistant to the vice-president—operations, Celanese International Corp. Mr. Taylor joined Celanese in 1942 as an analyst in the chemical laboratory of the Narrows (Va.) Plant. He was appointed to his most recent post as manager of textile manufacturing development last June. Succeeding him in that post will be Dr. Robert S. Dicks who joined Celanese in 1953.

Dr. Frank M. Cowen has been named manager of the textile chemicals research section in the Bound Brook (N. J.) Laboratories of the research division of American Cyanamid Co. He succeeds Dr. J. M. Salisbury who has become manager of the technical department of the fibers division's Santa Rosa (Fla.) Plant. Dr. Cowen graduated from Ohio Wesleyan University and received his doctorate degree from Purdue University. He joined Cyanamid in 1947 as a research chemist at the Stamford Laboratories. In 1953 he was a chemist-in-charge of a pre-pilot plant in the research department and was named group leader in the process development department in 1954.

Myron J. Coplan, assistant director of Fabric Research Laboratories Inc., Dedham, Mass., participated in the conference of the International Wool Secretariat held in London, England, November 18-22. He attended the conference as an authority on woolen fabrics. Special emphasis in the discussions was on researches for improving minimum-care properties in wool.

Werner Von Bergen, director of research and control laboratories for the Forstmann Woolen Co., has been appointed associate director of research for J. P. Stevens & Co. Inc. He will make his headquarters at the Forstmann Laboratories at Garfield, N. J. A native of Switzerland, Mr. Von Bergen has been associated with woolen manufacturing since 1919 and has been a member of the Forstmann Woolen Co. since 1926. He served for ten years as chairman of D-13, sub-committee A-3 on wool and its products of the American Society for Testing Material. For more than ten years he was a member of the research council of the American Association of Textile Chemists & Colorists and was the recipient of the Olney Medal of this society in November 1952.

Harold P. Duncan, superintendent of the Milledgeville, Ga., plant of J. P. Stevens & Co., has been named manager of the worsted manufacturing operations in the Southern group of the company's woolen and worsted division. Robert Holcombe has been named superintendent to succeed Mr. Duncan, and J. E. Neighbors has been named assistant superintendent. The Southern group of the woolen and worsted division is comprised of plants located at Dublin and Milledgeville in Georgia, and in Rockingham, N. C.

Hugh Puckett has been named director of sales and R. W. Daniels, assistant director of sales for the organic chemicals division, American Cyanamid Co., New York City. Mr. Puckett has been with the company since 1937 when he joined the firm as assistant Southern sales manager. He later served as Southern sales manager and since 1953 has been manager of the specialty products department of the organic chemicals division. . . . Mr. Daniels has been with Cyanamid since 1936 when he graduated from Dartmouth College. Former-

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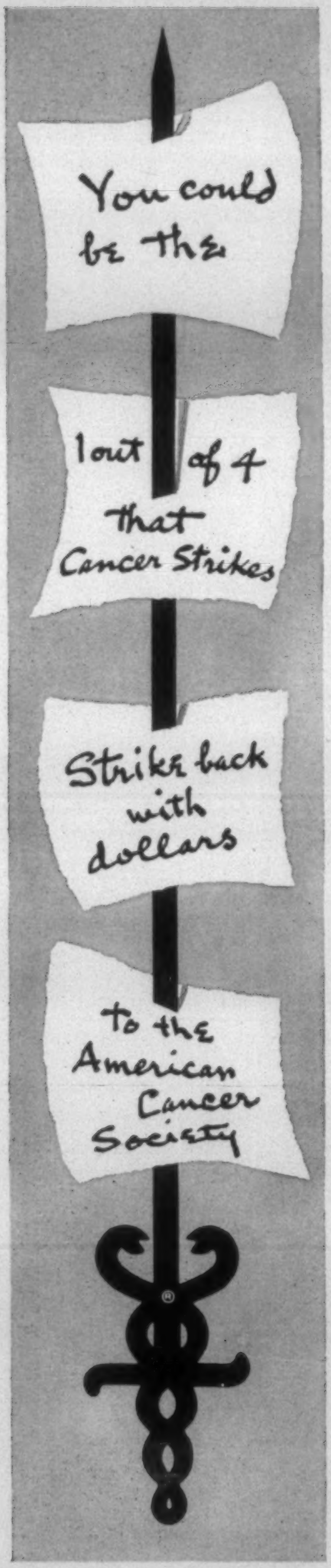
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ly manager of the intermediates department of the organic chemicals division, he has served the company in various other sales and managerial posts.

Maurice D. Holmes has joined the Chemstrand Corp., Decatur, Ala., as a senior representative in the technical sales service department. He will work out of the Decatur office and will give technical assistance to customers in their use of chemical textile fibers produced by the company. Mr. Holmes has served as superintendent of the yarn division of Greenville (Miss.) Mills Inc. for the past five years. Prior to that he served as plant superintendent of the Quitman (Ga.) Mills Inc. Mr. Holmes is a graduate of the University of South Carolina.

J. L. Jennings, executive vice-president of West Point (Ga.) Mfg. Co., has been elected to the board of trustees of the Georgia Tech National Alumni Association. Mr. Jennings will assume his new post Nov. 30.

Olin Evans has been promoted to production manager of Union-Buffalo Mills, Union, S. C. Mr. Evans was formerly spinning overseer. . . . Paul Babb has been promoted to shift overseer in the company's spinning department. He was formerly a trainee at Aragon Mill, Union Mill and Elberton.

James A. Long Jr. has been elected president of Roxboro (N. C.) Cotton Mills, succeeding R. L. Harris who has been named chairman of the board. Mr. Long was formerly vice-president and treasurer of the company.

William B. Thomas has joined Barnes Textile Associates, Spartanburg, S. C., as senior engineer. Mr. Thomas, who has had 30 years' experience in Southern textile mills, will specialize in the technical aspects of textile manufacturing. He was formerly with Brodnax (Va.) Mills.

J. Frank Caylor has been named manager of the Rome, Ga., plant of the Celanese Corp. of America, succeeding William E. Crooks who has been named manager of the company's plant at Cumberland, Md. Mr. Caylor joined Celanese at Rome in 1929 and has served there continuously ever since. He has served as assistant plant manager since 1945.

OBITUARIES

Clare H. Draper Jr., 54, division manager of Draper Corp., Greensboro, N. C., died Oct. 20 after undergoing an operation. A native of Hopedale, Mass., and a graduate of Yale University, he was stationed in Atlanta, Ga., as Southern representative of the textile machinery manufacturing company for a number of years. He was transferred to Spartanburg, S. C., in 1929 and made division manager at Greensboro two years ago. Mr. Draper is survived by his widow, two sons, three brothers and a sister.

John H. Geitner, 64, president and treasurer of Ivey Weavers Inc., Hickory, N. C., died Nov. 15 after a brief illness. In addition to his textile affiliation, Mr. Geitner was president of the First Savings and Loan Association, Hickory, and had been active in American Legion affairs. He is survived by his widow, one son and a sister.

John L. Graves, 68, of Winchester, Mass., sales manager for the Saco-Lowell Shops, died in Boston on Nov. 4 after a short illness. Upon completion of his education at Maryville (Tenn.) College, Mr. Graves joined Callaway Mills Co. He joined Saco-Lowell in 1919 in the company's Charlotte, N. C., office. In 1945, after 26 years' service in the company's sales offices at Charlotte, Greenville, S. C., and Atlanta, Ga., where he was in charge for many years, he was appointed sales manager and made his headquarters in Boston. Mr. Graves is survived by his widow and a daughter.

Samuel T. Hobbs, 77, son of the founder of Hobbs Mfg. Co., textile machinery manufacturer in Worcester, Mass., died Nov. 5 at his home. Mr. Hobbs had been active in the affairs of the company prior to his retirement a number of years ago.

William Alexander Marley, 80, well-known Gastonia, N. C., textile executive, died Nov. 4. He started in the textile business in Lincoln County, N. C., and moved to Gastonia in 1919. Mr. Marley became overseer of carding at Rankin Mills and in succeeding years he served as superintendent of the Rankin, Pinkney and Hanover Mills. He is survived by his widow, three sons and a brother.

George E. Repass, 79, retired Draper Corp. inventor, died in Boston, Mass., Oct. 24. His long career included 38 years in Southern textile mills and 20 years with three machinery manufacturers. He joined Draper some 14 years ago after serving with Howard & Bullough Machine Co., Pawtucket, R. I. Mr. Repass held patents for a midget feeler, a picker and an automatic builder spinning machine. His latest patent covered a finder bunch at the top of the bobbin. He is survived by his widow and two sons.

Joseph K. Sumner, operator of Sumner Textile Co., a textile machinery salvage firm of Charlotte, N. C., died Nov. 6 when his light plane crashed in a field near Laurinburg, N. C. He was returning from a business trip to South Carolina at the time. He is survived by his widow and three daughters.

John Alfred Swanson, 85, general manager, Dundee Mills Inc., Griffin, Ga., died Nov. 4. A native of Sweden, Mr. Swanson came to this country with his parents as a boy and settled in Rhode Island. He moved to Griffin in 1925 and became general manager at Dundee. Mr. Swanson is survived by his widow and two daughters.

W. P. Woodcock, sales engineer for American Moistening Co. for over 35 years, died Oct. 27. Mr. Woodcock was buried in South Weymouth, Mass.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

KANNAPOLIS, N. C.—Cannon Mills Co. has absorbed two of its subsidiary operations in South Carolina, making both a part of the parent company. Central Mills at York, S. C., has been designated Plant 3, Cannon Mills Co., and Central Mills at Central, S. C., will be known as Plant 12. J. W. Wallace, former president and treasurer of Central Mills, has been named vice-president of the parent company and will remain executive officer of the two South Carolina plants. No other changes will be made under the new arrangement, with Reid Williams continuing as superintendent of the York plant and E. L. Bolick as superintendent of the Central plant.

LAURENS, S. C.—R. L. Huffines, chairman of the Southern division of Frank G. Binswanger Inc., national industrial realtor, has announced that a multi-million dollar fancy weaving plant will be built here. The plant will be known as Graham Mfg. Co. and will employ about 500 persons. Plans are for a 200,000-square-foot air conditioned plant to be built by Daniel Construction Co. of Greenville, S. C., with construction scheduled to get under way December 2. Operations are expected to begin some time next Summer.

LEXINGTON, N. C. — Wennonah Cotton Mills Co., here, celebrated its 71st anniversary with a banquet held in October. Dr. J. Lem Stokes, president of Pfeiffer College was the main speaker. Ten and 25-year service pins were awarded at the dinner which was attended by more than 800 mill employees and guests.

DOUGLASVILLE, GA.—The main building and three auxiliary structures of the old Glendale Mills, here, are being offered for sale, according to Adams-Cates Co., a local realtor. Sales price for the plant is $175,000. The main building consists of a two-story brick building which totals 92,000-square-feet. Two warehouses add a total of 43,000-square-feet of floor space. A separate office building is also for sale. The building is sprinklered and the property includes a 1,700,000-gallon open reservoir and a tank of 90,000-gallon capacity. The plant had been operated as a subsidiary of J. L. Stifel & Sons Inc. which recently merged with Indian Head Mills.

ANDERSON, S. C. — The former plant here of LaFrance Automotive Fabrics Inc., subsidiary of LaFrance Industries, is being offered for sale through Alester G. Furman Co., Greenville, S. C. The purchase price of the property is said to be about $175,000. The plant comprises a total of 52,163-square-feet with a two-story brick main building of 14,592-square-feet plus additional auxiliary structures. The plant is situated on a 2.85-acre tract of land.

GRIFFIN, GA. — Contracts for the construction of a one-story and basement addition at the Dundee Mills Inc. plant here were let Oct. 15. The reinforced concrete building will be built between the company's two weave rooms and is planned solely to stabilize the two buildings. New high speed looms have been placed in operation in the plant. The structure definitely does not represent an expansion and no additional looms will be added. Some looms will be moved from the third floor of the weave rooms to the new building which is expected to be completed in about six months.

NEW ORLEANS, LA.—Lane Cotton Mills Co., a subsidiary of M. Lowenstein & Sons Inc., here, has announced that Comer Machinery Co. Inc., Atlanta, Ga., and Charlotte, N. C., has been appointed agent to sell all of its machinery and equipment. The Lane plant manufactured denims and has approximately 42,000 spindles and 1,400 looms along with auxiliary finishing equipment.

GREENVILLE, S. C.—A new member organization of Burlington Industries, to be known as B. I. Cotton Mills, has been established with headquarters here. The new organization will operate the Ely & Walker group of mills and the Martel-Henrietta group, a total of 14 plants with approximately 548,000 spindles and 14,600 looms. The E-W group has seven plants located in Greenville and Calhoun Falls, S. C.; High Shoals, Marion and Tarboro, N. C.; and Sherman and Post, Tex. The M-H group has seven plants located in Asheville, Caroleen and Henrietta, N. C.; and Batesburg, Lexington, Spartanburg and Cherokee Falls, S. C.

THOMASTON, GA. — Martha Mills here, a division of B. F. Goodrich Co., has recently ordered 38,000 spindles of Dixon saddle guide changeovers for Duo-Roth spinning. The changeovers are products of the Dixon Corp., Bristol, R. I. In addition, the company has announced that it will sell houses in its mill village to employees. The employees occupying a house will be given the first opportunity to buy it. If unwanted, another employee has second choice. The company plans to give the schools, streets, alleys and sewerage system to the city of Silvertown. The water distribution system will be leased to the city. The people of Silvertown will determine by a referendum whether they wish to remain as the city of Silvertown or merge with the city of Thomaston.

GREENSBORO, N. C.—Net earnings of Cone Mills Corp., here, were lower in the first nine months of this year but sales showed improvement. For the nine months ended Sept. 30, consolidated net profit was $3,280,665, equal to 91 cents a common share. This compares with net earnings in the like 1956 period of $4,271,752 or $1.20 per common share. Consolidated net sales rose to $131,430,282 from $120,673,369 in the comparable period last year.

LYMAN, S. C.—The Lyman Printing & Finishing Co. Inc., a division of M. Lowenstein & Sons Inc., here, has been appointed a licensee for the new Aston anti-static finish developed and manufactured by the Onyx Oil & Chemical Co., Jersey City, N. J. Lyman has discovered specific safety applications for Aston where static build-up in synthetic fabrics has presented a hazardous operating environment.

SPARTANBURG, S. C.—Normal operations have been curtailed at the Beaumont Division of Spartan Mills here. The extent of the curtailment was not made known. The amount of inventory which Beaumont has on hand and the lack of orders for the future have so far made it impossible to reinstate a five-day schedule of operations, according to a company spokesman. Hope has been expressed that the plant would be able to resume a five-day operating schedule soon.

HOT SPRINGS, N. C.—The Goodall-Sanford plant located here is transferring to Raeford (N. C.) Worsted Division and will soon be adding new equipment and more employees to increase production. Both organizations are member companies of Burlington Industries. The Goodall-Sanford plant has been producing yarn for sales to other companies but now becomes an integrated part of the Raeford operation and will produce yarn for utilization in the production of worsted fabrics.

CARLISLE, S. C.—The Carlisle Finishing Co. of Cone Mills Corp. here held an open house Nov. 5 for families of the 450 men and women whom it employs. The occasion coincided with the first anniversary of the initial run of printing in the plant which went into production during the latter part of 1956. The plant is now operating two full shifts and will eventually have a third. Approximately 1,000 persons heard a brief explanation of the operations and then toured the plant.

PAMPAS, TEX. — Operations have begun at Celanese Corp. of America's new acrylate ester plant here. Capacity of the new facilities is 15 million pounds annually. Acrylate esters are one of the petrochemicals family and are used in modifying the properties of acrylic fibers for manufacturing textile finishes and in backings for carpets and upholstery fabrics.

SHELBY, N. C.—Neisler Enterprises Inc. here, a new novelty fabric plant, has begun making sample fabrics. The company has some 30 looms installed and is presently employing about 12 persons. When in full production, approximately 100 persons will be employed at the plant.

NEW YORK, N. Y.—Textron Inc. reported in its third quarter financial statement that its textile division, Amerotron Corp., has continued to show progress and that it operated at a profit during the third quarter. This compares with a substantial loss during the corresponding quarter of 1956. No specific figures were given for the firm's textile division earnings.

Jones Elected President Of N.C.T.M.A.

In his address as retiring president of the North Carolina Textile Manufacturers Association last month, J. C. Roberts, president of Textiles-Incorporated, Gastonia, N. C., sounded a note of guarded optimism for the industry in the days ahead. Among reasons for the bright outlook given by Mr. Roberts were the likelihood in the near future of one-price, or competitive, cotton on the world market and the solution, at least temporarily, to the problem of excessive imports of textiles from Japan.

Roberts, Marshall
Cannon, Jones, Cowan

Halbert M. Jones, president of Waverly Mills, Laurinburg, N. C., was elected president of the North Carolina Textile Manufacturers Association last month at the group's 51st annual convention at Pinehurst, N. C. He succeeds J. C. Roberts, vice-president of Textiles-Incorporated, Gastonia. W. C. Cannon, vice-president of Cannon Mills Co., Kannapolis, was named first vice-president, and J. C. Cowan Jr., vice-chairman of the board of Burlington Industries, Greensboro, was named second vice-president. Hunter Marshall of Charlotte is secretary and treasurer.

In his review of the year's activities, Mr. Roberts reported indications in Washington point to a more favorable climate than ever before for the elimination of the price advantage now enjoyed by foreign competitors over domestic mills in the purchase of American cotton. He told of efforts made by the association, in co-operation with others, to bring about one-price cotton with the price realistically geared to the competitive factors, including foreign-grown cottons and other important competing materials.

As for the arrangement for quotas on Japanese imports into this country, arrived at last January, Mr. Roberts declared the system was perhaps not the happiest solution to the problem, but that it deserved a fair trial in the minds of those concerned following a realistic appraisal of the situation. The significance of the change in the state's tax structure; effort put forth by the association to attract qualified young people to the industry, and the problem of low percentage of profits on dollar sales also were touched upon.

Other speakers at the meeting included Dr. William Friday, president of the University of North Carolina, who gave a progress report on the university, and Dr. Leonard Smith, director of the utilization research division of the National Cotton Council at Memphis, Tenn.

Dr. Smith told the convention that the first step toward expanding the total textile market is to develop adequate market research. He pointed out that a move in this direction was made last May when the National Cotton Council sponsored the first joint Textile Market Research Conference. He noted that plans are being drawn for a second such conference.

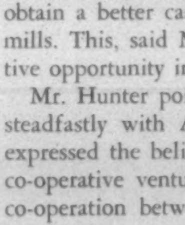
Cotton is willing to work with other industries in developing a bigger market for all fibers, Dr. Smith said, but at the same time cotton will also intensify its own competitive efforts in this market. He cited a number of areas in which cotton has progressed in recent years through research, and expressed the conviction that continued research and improved technology will bring about further reductions in production costs while at the same time improving cotton's quality.

In the annual election of officers, Halbert M. Jones, president of Waverly Mills, Laurinburg, N. C., was named president of the association for the coming year. He succeeds Mr. Roberts. Elevated from second to first vice-presidency was W. C. Cannon, vice-president of Cannon Mills Co., Kannapolis, N. C. Succeeding Mr. Cannon as second vice-president is J. C. Cowan Jr., vice-chairman of the board of Burlington Industries, Greensboro, N. C. Hunter Marshall of Charlotte is secretary and treasurer.

Charlotte Textile Club Elects Hamilton

Don E. Hamilton of Charlotte, president of the Comer Machinery Co. of North Carolina, has been elected president of the Greater Charlotte Textile Club for 1958. He will succeed David R. Johnston, president of Johnston Mills Co., at the December meeting of the club. Other officers named include James D. Barbee, Burlington Industries, Cramerton, N. C., first vice-president; Herbert Woodward, Southeastern Factors, second vice-president; and Demont Roseman, *The Charlotte Observer,* secretary-treasurer.

Hunter Urges Revised Depreciation Rates



James H. Hunter

How unrealistic depreciation rates on capital equipment have imperiled the nation's textile industry was forcefully pointed up in a talk delivered November 11 to the Greater Charlotte Textile Club. James H. Hunter, president of the American Textile Machinery Association, and guest speaker of the club, lauded the efforts of the American Cotton Manufacturers Institute to overcome the depreciation problem on capital equipment and to obtain a better cash flow with which to modernize textile mills. This, said Mr. Hunter, would give them a competitive opportunity in a global market.

Mr. Hunter pointed out that the A.T.M.A. has worked steadfastly with A.C.M.I. on the depreciation study. He expressed the belief this joint effort would result in other co-operative ventures. "Only by a continuing program of co-operation between the textile machinery manufacturers of this country and our customer organizations can we hope that the textile industry, and ourselves, may eradicate grievous economic ills which have become 'epidemic,'" he said.

The American textile industry can undoubtedly overcome many of its difficulties provided it is enabled to take full advantage of modern, time-saving, cost reducing machinery now available, said Mr. Hunter. He pointed out that a fully modernized 25,000-spindle combed broadcloth mill, producing approximately 14,000 yards per week, may have an annual savings on direct labor costs of close to $400,000, compared to a mill with obsolete equipment. "Project that saving throughout a completely modernized industry and you will find textile prosperity again," he said.

However, Mr. Hunter said, a vast modernization program must be undertaken before such savings can assist in proper magnitude in the industry's economic rehabilitation. He said a recent survey by A.T.M.A. showed that 50 per cent of the approximately 450,000 looms in this country are more than 27 years old, and the average age of the balance is 11 years old. He said A.T.M.A. records show that of the approximately 20,000,000 spindles now being operated half were installed prior to 1930, and the average age of those installed since 1930 was 16 years old.

"One has only to compare production efficiency and cost saving factors of modern equipment with that of obsolete equipment now in place to realize what causes the textile industry's greatest headache," he said. The recent survey indicates that 75 per cent of the industry's equipment is obsolete as far as its profit life is concerned. "The machinery in place is not worn out, but has long ago outlived its economic life. When a machine can no longer make a profit for a mill, then it is an encumbrance to a mill's financial success. In order for mills to maintain a profitable position under today's competitive market conditions, long term machinery replacement programs should coincide with the profit life of each machine throughout the entire plant. Planned replacement is definitely profit insurance," he added.

Mr. Hunter pointed out that depreciation allowances are simply compensation for the loss in productive value of an investment in income-producing facilities including machinery. The only sensible concept on which to base depreciation is on profit life, and not the physical life of the equipment. "American built textile machinery is the most efficient in the world—American machinery can help close the market gap for American mills when the industry modernizes on a continuing basis," he stressed. "This can only be attained when more realistic depreciation treatment is allowed by the Internal Revenue Department on a mill's capital equipment investment. When that time comes one of the industry's major problems will be solved."

Mr. Hunter is president of the James Hunter Machine Co., North Adams, Mass., and James Hunter Inc., Greenville, S. C., manufacturer of finishing and blending equipment for the textile industry.

John Cauthen Named To S. C. Chamber

A number of persons prominent in the textile industry participated in the annual meeting of the South Carolina State Chamber of Commerce held Nov. 21 in Columbia. Elected as a new director of the chamber was John K. Cauthen, executive-vice-president of the South Carolina Textile Manufacturers Association. Re-elected for two-year terms were Charles W. Coker of Sonoco Products Co., Hartsville, S. C.; Charles E. Daniel of Daniel Construcion Co., Greenville, S. C.; and C. S. Henerey of Bamberg Textile Mills, Bamberg.

Continuing directors include Marion Beacham of Amerotron Corp., Barnwell; James A. Chapman Jr., Inman Mills, Inman; H. W. Kimmell, Carolyn Chenilles Inc., Saluda;

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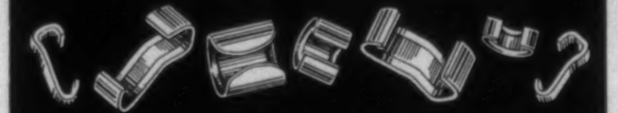

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M. A. Kirkland, retired executive of United States Rubber Co., Winnsboro; Robert J. Saunders, Dixiana Mills, Dillon; and Robert M. Vance, Clinton and Lydia Cotton Mills, Clinton; and M. S. Bailey & Sons, Clinton.

B. D. Cowan of the Du Pont Co.'s May Plant at Camden and Aubrey Marshall of Wellington Mills, Anderson, completed terms on the chamber's directorate.

Mills Plan Cut Back In Holiday Operations

The curtailment movement among cotton mills has broadened as a number of mills indicated that they would follow the lead of M. Lowenstein & Sons and close print cloth goods plants for a long Thanksgiving Day week-end and were studying the possibility of similar action for the entire Christmas Week. Some mills reported plans to close part of the Christmas Week and part of the New Year's Week. Heavy goods mills have been on three and four-day weeks for some months. Some sheetings mills have shut down for as long as two weeks at a time in the face of a slow market.

Greenwood (S. C.) Mills Inc. has indicated that it will be closed for a long Thanksgiving Day week-end and there is a possibility of shutting down Christmas Week. About 6,000 looms will be involved. Kendall Mills will close two mills, the Albertville (Ala.) Plant and the Pelzer (S. C.) Plant, with about 2,500 looms on prints for the long Thanksgiving Day week-end. Abney Mills, Greenwood, S. C., has announced that it will be closed during the long Thanksgiving holiday and plans to be shut down for the equivalent of a full week during the Christmas season.

In announcing his company's decision to take the long holiday, Leon Lowenstein, chairman of the board, M. Lowenstein & Sons, said that "if this industry, which is so important to the welfare of the country is put in balance—distribution versus production—it is only a question of time until the industry must show a proper return on its investment." He also pointed out that when the primary market shows a profit, it has always followed that the users of these greige goods, such as converters, and the users of finished piece goods, such as end-use manufacturers, chain stores, mail order companies, department stores and others, get their normal profit and distribute more fabrics to the consumer. The Lowenstein organization is said to be the largest single producer of print cloth in addition to being the largest purchaser of prints.

The contention that curtailment would work a hardship on mill employees is held to be fallacious in that building up inventories only serves to keep the market depressed so much longer. In the long run this is more harmful to both the mills and the employees. Prices on print cloth were quoted around the first of November at 17¼-17½ cents for 39-inch, 80x80, 4.00 yard for spot delivery depending on quality. This compares with a price of 19¼ cents for the same goods about a year ago.

S. C. Textilists Urge State Tax Be Unchanged

South Carolina textile manufacturers, though hard pressed, are not seeking any tax relief from the State, according to John K. Cauthen, executive vice-president of the South Carolina Textile Manufacturers Association. His views were presented in a letter to the Corporate Income Tax Committee of the State's General Assembly in Columbia.

The letter from Mr. Cauthen to the committee chairman said, "first, we wish to make it clear that our industry, although hard pressed economically for several years, has not sought and is not seeking any tax relief from the State. We feel that the present tax structure, as it affects the textile industry now operating, puts us in a fair competitive position with neighboring textile states. For our industry to prosper, we must be kept on a competitive basis with our neighbors."

Mr. Cauthen's position was that it would be ultimately unfair in the cause of attracting new industries to impose, through technicalities, heavier burdens on those companies which already are helping to make the state prosperous. "Our industry," he said, "still is in a depressed economic condition, under which little or no profits are possible. We strongly urge your committee not to recommend any legislation which would impose new tax burdens of any kind upon us."

Making reference to the fact that South Carolina is twice as dependent economically upon textiles as other states, Mr. Cauthen said, "it is certainly important to the progress of the state that we recover from our bad plight. Additional tax burdens of any kind would seriously hamper such a recovery."

Curriculum O.K. But Enrollment Worries Deans

The deans of our textile colleges remain deeply concerned over the continued decline in enrollments in the face of a favorable preliminary report of a survey on textile education being made by Arthur D. Little Inc., Cambridge, Mass. The management consulting firm presented its preliminary report on the survey at a meeting of the National Council for Textile Education at the Parkview Hotel, Memphis, Tenn., Oct. 29. While the final report will not be ready for a while, the preliminary report stated that textile education has been keeping abreast of the industry's needs and keeping up with the thinking of the industry's leaders.

Like every survey, this one is susceptible to numerous interpretations. The presumption is, however, that it already indicates the character of the findings that will be revealed when finally completed. The deans see the results as completely confirming their thinking and the curricula revisions which have been made in recent years. Also shown, quite clearly substantiating what the deans have been persisting, is that textile employers are suggesting changes in courses which took place several years ago. This emphasizes a conviction of the deans that too few executives in the industry really are aware of what is going on in their textile colleges.

Many suggestions have come in saying that textile colleges should give less attention to textile technology and more to the liberal arts, to communications and to humanities. This is felt to be necessary to produce a graduate who is more flexible for whatever position of responsibility for which he might be groomed. It is pointed out that this transition has been uppermost in the minds of the deans of all textile colleges for several years. The deans reiterated, as they have been doing at their previous semi-annual meetings, that this is the pattern they have been following for some time.

In discussing declining enrollment, the deans cited the fact that generally this was off from ten to 15 per cent from a year ago. The total enrollment for the current Fall term

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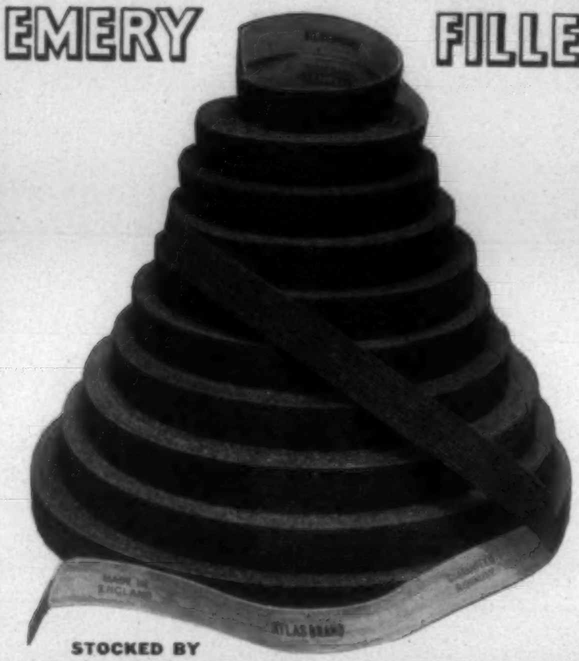

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at 12 textile colleges is about 1,921. This compares with 2,285 for 1956; 2,542 for 1955; 2,562 for 1954; 2,346 for 1953, and 2,442 for 1952.

In examining the subject of declining enrollment the deans cited three outstanding reasons: (1) poor public relations of the industry; (2) the search by the Armed Forces for so many engineers who are not in the textile category; and (3) engineering salaries in other fields luring young men away. It was pointed out that first and foremost poor public relations have done so much to sour the views of young people, and their parents, whenever textiles are proposed for a career. This view has apparently made widespread and deep-rooted headway. Some of the textile colleges are making vigorous efforts to bring their enrollments up but evidently with not too much success.

The deans also expressed the opinion that they are not satisfied with the text books with which they have to work. They felt that this need could be filled if there could be a grant for the writing of text books for the textile colleges. After much discussion it was agreed that an experiment would be made along the lines of having various faculty members write chapters in their specialized fields. These chapters would then be co-ordinated into book form. It was felt that the most pressing need was for a textbook on opening, picking and carding.

In a report concurrent to the meeting of the deans, Clemson College announced a significant increase in textile school freshmen which reverses the downward trend in enrollment. It is reported that 94 new freshmen are enrolled this Fall as compared with 79 last year. The report expresses pleasure over the balance of the new students to the industry's needs: ten in textile chemistry, 38 in textile manufacturing and 46 in textile engineering. The curbing of the national decline at Clemson is said to be the direct result of a positive program of development jointly established by the School of Textiles and the South Carolina Textile Manufacturers' Association a year ago. The J. E. Sirrine Textile Foundation was also cited for its important role in the total program.

In elections held at the end of the meeting, the council named Cleveland L. Adams, Alabama Polytechnic Institute, Auburn, and former council secretary and vice-president, to the post of president. Dr. J. H. Dillon, director of the Textile Research Institute, Princeton, N. J., was elected vice-president. The new treasurer is E. T. Pickard, Kent, Conn., and R. K. Flege of Lubbock, Tex., is secretary.

Georgia Textile Foundation Elects Baum

The Georgia Textile Education Foundation held its sixteenth annual meeting on the Georgia Tech campus last month and elected as its new president, John P. Baum, vice-president of J. P. Stevens & Co., Milledgeville.

The foundation, established by Georgia's textile industry during World War II to assist the A. French Textile School at Georgia Tech, regularly supplements state funds allocated the school. All of the foundation's income and efforts are directed toward the school. Foundation officials and members heard the organization's operations during the past year outlined at the meeting in a series of reports. Reports also were made by members of the A. French Textile School.

Henry W. Swift, president of Swift Spinning Mills, Columbus, was elected vice-president of the foundation. J. M. Cheatham, president of Dundee Mills Inc., Griffin, was named treasurer; T. M. Forbes, executive vice-president of the Cotton Manufacturers Association of Georgia, Atlanta, was elected executive vice-president; and Frank L. Carter, secretary of the C.M.A.G., was elected secretary.

B. W. Whorton, president of Dixie Mills Inc., LaGrange, the foundation's retiring president, was named chairman of the executive committee. Serving with Mr. Whorton on this committee will be Messrs. Baum, Swift, Cheatham and Mr. Earl Heard Sr., vice-president in charge of research for the West Point Mfg. Co. New directors are Mr. Baum; C. C. Hertwig, chairman of the board, Bibb Mfg. Co., Macon; Roger Dickinson, manager of Coats & Clark Inc., Albany; A. S. Durkee, superintendent of Macon Textile Division, Bachmann Uxbridge Worsted Corp.; Dunbar Jewell, Crystal Springs Bleachery, Chickamauga; and Tom M. Bryan, vice-president and treasurer of The Jefferson Mills at Jefferson. C. C. Hertwig was named chairman of the investment committee. Serving with Mr. Hertwig will be C. M. Neuner, manager, Aldora Mills, Barnesville; M. F. Cole, superintendent, Mt. Vernon Mills, Newnan; and Messrs. Baum and Cheatham.

Student Loan Fund Instituted At N. C. State

A $500 student loan fund has been contributed by John C. Roberts, president of Textiles-Incorporated, Gastonia, N. C., and recent president of the North Carolina Textile Manufacturers Association, to the School of Textiles at North Carolina State College, Raleigh. The fund will be administered by the school's textile scholarship committee, headed by G. H. Dunlap, who is also director of textile students affairs.

Marketing Opportunities Parley Slated

At the textile market research advisory committee meeting, held in Washington, D. C., November 13, it was agreed that an industry-wide conference would be held in 1958 and should include discussion of specific marketing opportunities as well as statistical needs of the industry. The committee, representing producers and processors of all textile fibers, textile merchandisers, chemical suppliers, textile trade associations and government agencies, met at the invitation of the National Cotton Council. The group agreed that another conference tied more directly to end-product consumption of textiles would be highly beneficial.

Last year's council-sponsored conference pointed out the pressing need for improved market research data so that the entire textile industry could better compete for the consumer dollar. Next year's conference will attempt to pinpoint certain areas where improved marketing of textiles could develop new fabric markets or regain markets temporarily lost to non-textile products. Among the topics proposed for discussion at the conference were improved consumer financing of garments and household textiles, more pronounced style changes and special purpose garments.

The 1958 conference will be held in New York City during the middle of May. An announcement of the exact date and location will be made when final arrangements have been completed. Members of the textile market research advisory committee who attended the meeting are: Raymond A. All, United States Rubber Co.; R. Buford Brandeis, American Cotton Manufacturers Institute; Max-

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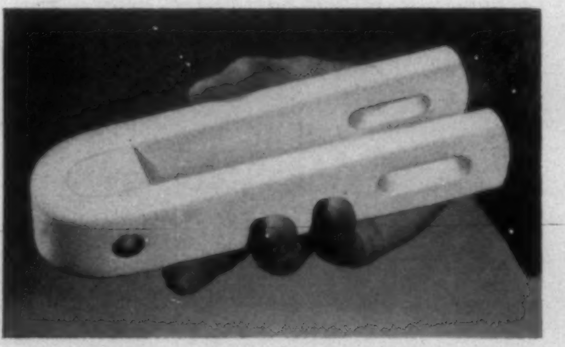

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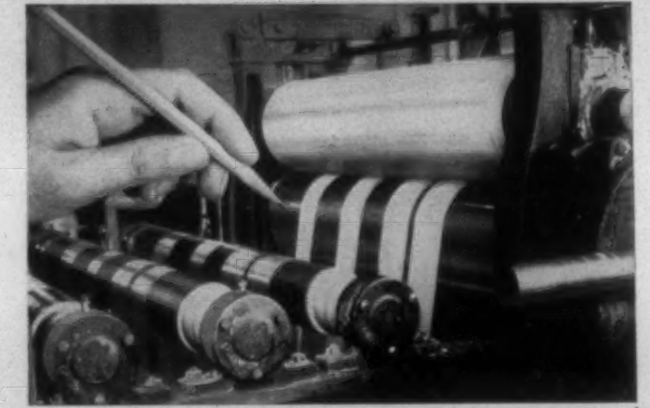

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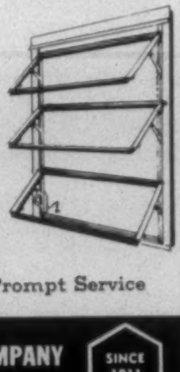

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Research Funds Granted Textile Educators

Three textile educators have become the first in their field to participate in the Faculty Research and Professional Development Fund at North Carolina State College, Raleigh. Those who have received grants are Henry Middletown, assistant professor of knitting, who is establishing visual aids for knitting instruction in the classroom; Prof. D. S. Hamby, who will make studies on measuring degrees of variability in the various stages of yarn processing; and Prof. E. B. Grover, head of the department of yarn and fiber technology, who will do research on variations in factors in cotton marketing.

1958 Colors For Man-Made Fibers, Wool, Silk

Gleaming jewel-bright hues called "Stars Of The Night" play up the brilliant theme in the Advance 1958 Fall and Winter Color Collection for Man-Made Fibers and Silk, just issued by The Color Association of the U. S. to its members. In this rich palette, lending lustre to the Winter evening scene, are Jewel Pink, Party Blue, Gold Glamour, Emerald Gleam, Sapphire Glow, Gala Coral, Radiant Violet and Glitter Red. In announcing these new colors, Estelle M. Tennis, executive director of the association, said the collection has been presented two weeks earlier than last year, as in the case of the woolen and worsted colors, to meet the advanced styling schedules of the association's members.

Italian colors, clear bright pastels inspired by the charm of sunny Italy, reflect the lighter color motif of this advance collection. In this group are Roman Blue, Florentine Pink, Capri Turquoise, Venetian Yellow, Como Coral, Tivoli Green, Tuscan Melon and Italian Lilac. A special feature of this Autumn preview is the group of eight "Town Shades." These colors comprise the greenish-tinged Gold Mustard, Amberspice of apricot cast, Blue Lustre in the royal range, the swagger Avenue Green, Plaza Blue with an undertone of purple, the fiery Boulevard Red, Urban Gray, a steel tone, and the vintage shade, Grape Cordial.

A bright outlook for sportswear is forecast in Shades Of The Alps, a group of intense vibrant hues, featured in the Advance 1958 Fall and Winter Color Collection for Woolens and Worsteds, just released by the association. Inspired by the scenic beauty of the Alps, these vivid sports colors with a warm glow highlight Engadine Pink, a light raspberry shade, the greenish-tinged Swiss Gold, Mountain Blue of brilliant purplish undertone, Tyrolian Violet, a magenta version, Lake Turquoise, a deep jewel hue, Forest Blow, an orangy rust, Scenic Green, a lively forest shade, and the spicy Alpine Copper.

Southern sun colors, a group of clear animated pastels, play up another featured theme of the collection. This lighter Winter palette for cruise, resort and holiday wear includes White Sand, Resort Blue, Golden Sun, Island Coral, Patio Lime, Play Aqua, Cruise Mauve and Pink Sunset. Double tones, 12 groups of harmonizing shades, give advance indications of important color trends for Autumn 1958. Blues in new variations receive highest fashion rating. A vibrant new fashion influence is reflected in the spicy hues, Tropic Cinnamon and Spiced Apricot of orange cast. Greens considered promising in the advance fashion picture are the subtle yellow-tinged Bronzemist and the lighter Green Cactus.

Production Boosted On Trilok Fabrics

Production capacity for Trilok upholstery fabrics has been expanded by 50 per cent, Judson J. Milam Jr., Trilok sales manager for the textile division, United States Rubber Co., has announced. Mr. Milam said the expansion was necessary to meet demand from the automotive, furniture and transportation industries. He said the three-dimensional fabric will appear on the 1958 models of three auto manufacturers. The fabric, which is woven at Winnsboro (S. C.) Mills, has also met wide acceptance among furniture makers and is being specified in many military installations, government offices, schools, hospitals, hotels and other public buildings. In the transportation industry, Trilok has been adopted by several aircraft manufacturers and by some railways.

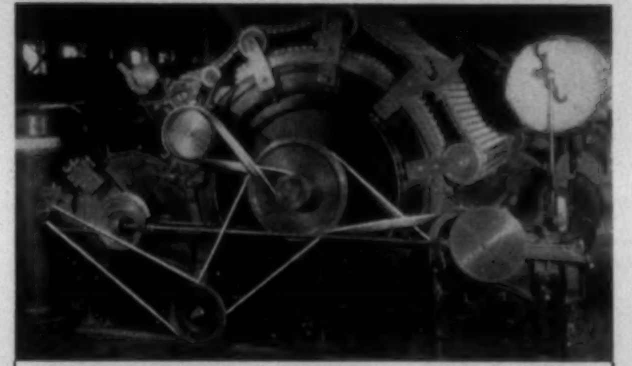
Temperature Range Of pH Scale Extended

The National Bureau of Standards, U. S. Department of Commerce, Washington, D. C., has recently extended the temperature range in which pH standards are certified. Formerly the pH scale was accurately determined only between 0° and 60°C. Now standard pH samples are available from 0° to 95°C. This extension was made possible by the work of E. V. Bower and R. G. Bates of the bureau's physical chemistry laboratories.

The standard pH scale was set up to meet the need for accurate measurement of acidity and basicity in aqueous solutions. In the manufacture of many commercial products—for example textiles and dyes—the rapidity and efficiency of the processes depend upon the accuracy with which pH can be controlled. The N.B.S. standard pH scale is defined in terms of several fixed points in much the same manner as is the International Temperature Scale. The primary standards of the pH scale are solutions whose pH values are only slightly affected by dilution or by accidental contamination with traces of acid or alkali from the walls of the container or from the atmosphere. The substances from which the standard solutions are prepared are, in turn, stable materials which may be obtained as certified standard samples from the bureau.

In order to assign values to the N.B.S. standards, the electromotive force of cells employing the standards as electrolytes was measured. These cells are specially designed, utilizing the highly reproducible hydrogen and silver-silver chloride electrodes. Computation of pH is based upon several reasonable, assumed relationships between ionic activities and mean activities. Until recently, data for the standard potential of the silver-silver chloride electrode above 60°C. were not available, so in spite of the demands of industry an extension of the pH scale to temperatures beyond 60° was not possible.

A recent determination of the standard potential of the silver-silver chloride electrode included measurements from



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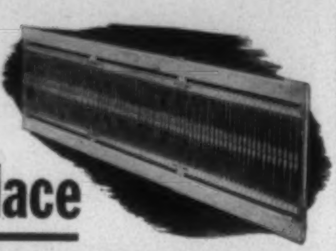

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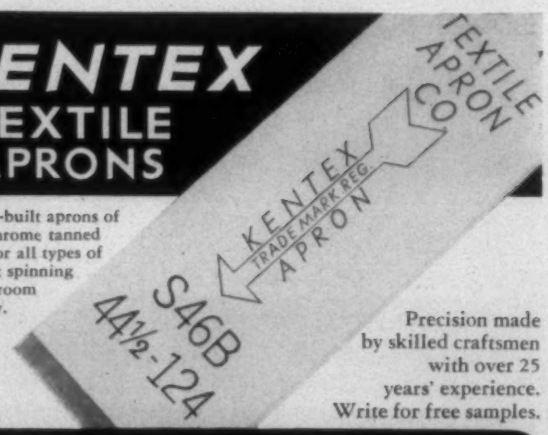

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0° to 95°C. With these new data it became possible to assign pH values over the extended range of temperatures to five of the six substances used as standards. The sixth substance recently recommended as a highly alkaline standard was not certified for the extended temperature range.

Sputnik Seen As Factor In U. S. Retailing

Sputnik is likely to have an effect on retail business in the U. S. in the next few years. The probable effects were outlined by Malcolm P. McNair, professor of retailing, graduate school of business administration, Harvard University, Oct. 15 before a meeting of the Chicago Retail Controllers. He said that there is likely to be a hike in taxes "somewhere along the line" next year instead of the reduction some were expecting.

Professor McNair said that we also may see consumer credit control as a result of the successful launching of the Russian satellite. A corollary to the possible increase in taxes would be "somewhat of a curtailment" in consumer spending, he told the group. He said that his belief was that the "price tag" for adequate national defense will be this curtailment.

The three possible economic climates for retailing in the U. S. as a result of Sputnik were outlined by the educator as being: (1) adequate national defense, stiffer credit controls and more inflation; (2) inasmuch as danger points to our economy historically come 12-13 years after a major war, it may not be too easy to stop economic deflation once it has started, and it will probably be in the form of a dip similar to 1949; and (3) the economic climate may hold pretty much as it has been the past several years, posing great opportunities to retailing but also some disadvantages.

Professor McNair warned the group that department and specialty store retailing, particularly, must meet the challenge of social changes. These include the changing age makeup of the population; great urban shopping changes (remaking of downtown areas) and changes in store hours. He said that he believes the rehabilitation of downtown should go hand-in-hand with suburban growth.

Cites Multi-Process Textured Yarns

Textured filament nylon yarns which have been subjected to more than one texturing process on the same singles yarn are under experimentation, according to Fred W. Noechel of Allied Chemical & Dye Corp. speaking at a meeting of the American Association for Textile Technology at the Astor Hotel, New York City. In one sample of carpeting shown by Mr. Noechel, a strand of Caprolan nylon 6 had been subjected first to one kind of texturization and then was subjected to a second kind of texturization. That two texturing processes were being used served as a climax to Mr. Noechel's speech which dealt with new yarns for fabrics of tomorrow.

Confining his discussion largely to carpeting, Mr. Noechel pointed out that the new yarns possible would probably find beneficial application in all significant textile areas. He discussed single, two-ply and three-ply yarns of Caprolan nylon 6 filament in the form of "loop" textured yarns by the Leferon process of Leon-Ferenbach; the "curled" version made by the Agilon process of Deering, Milliken Research Corp.; the "crimped" type from the Spunized process of Hartford Spinning Co., and another crimped type from the Mylast process of Clarence A. Meyers Co. Mr. Noechel said that "textured yarns of filament Caprolan run the gamut of coverage from a close approximation of spun yarns through a middle range to a yarn many times the covering power of the spun."

Rayon And Acetate Shipments Increase

October shipments of rayon and acetate by United States producers amounted to 98,300,000 pounds, an increase of four per cent over the previous month but 3,700,000 pounds or 3½ per cent under October 1956 shipments, according to the *Textile Organon,* statistical bulletin of the Textile Economics Bureau Inc. October shipments this year included 96,900,000 pounds for the domestic market and 1,400,000 pounds for export.

High tenacity rayon yarn shipments in the latest month amounted to 24,700,000 pounds, ten per cent more than shipments in September but 17½ per cent below October 1956 deliveries. Regular+intermediate tenacity rayon yarn shipments in October came to 13,800,000 pounds, eight per cent greater than September shipments but 19½ per cent under those of October last year.

Acetate filament yarn shipments in the latest month were 20,000,000 pounds, a figure slightly above the September level and 15 per cent above October 1956. Rayon staple+tow shipments in October totaled 33,700,000 pounds, only 900,000 pounds under September and about equal to the October 1956 level. The publication notes a very substantial rise in acetate staple+tow shipments in October with a figure of 6,100,000 pounds, which was 22 per cent over September and 60½ per cent greater than shipments in October a year ago.

No Cut Seen In Jap Purchase Of U. S. Cotton

Japanese purchases of raw cotton from the U. S. will not be cut or affected by "unfavorable trade balances," according to Takashi Murayama, research director of the All-Japan Cotton Spinners' Association. Mr. Murayama, stopping off in New York City en route from the International Cotton Conference in Venice, Italy, said that loans from the Export-Import Bank might even permit a slight increase in the rate of raw cotton purchases from the U. S., despite steps taken by Tokyo to stem the flow of dollars from Japan. At the same time, it probably will be necessary to reduce raw cotton purchases by Japan from countries other than the U. S. Mr. Murayama noted that the principal reason for the dollar shortage in Japan is that twice as much is imported from the U. S. as is exported to this country.

Commenting on the Venice conference which was sponsored from Sept. 22-28 by the International Federation of Cotton and Allied Textile Industries, Mr. Murayama expressed satisfaction with the evidence of better understanding which emerged from the meeting. Noting the

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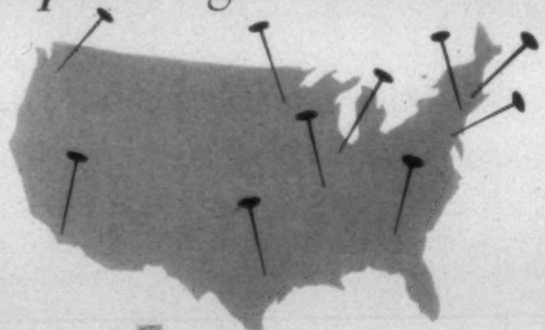

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highly competitive nature of the cotton and textile industries throughout the world, Mr. Murayama said that the opportunity for the representatives of the various nations to exchange views was a "good thing."

He said he was particularly pleased with the opportunity to meet with representatives of the American cotton and textile industries and discuss their mutual interests with them. Both American and Japanese representatives had ample opportunity for informal exchange of information, and the Japanese were very favorably impressed with the American leaders, he pointed out.

Wool Consumption Continues Downward Trend

The weekly average rate of fiber consumption on the woolen and worsted systems in September was six per cent below the August rate and two per cent below that of September 1956. The weekly average raw wool consumption during September was 7,014 thousand pounds (scoured basis) or three per cent below the August level, and ten per cent below that of September 1956. Consumption of apparel class wool was four per cent below the August level and nine per cent below that of September of last year.

Consumption of carpet class wool was two per cent below the rate of the preceding month and 11 per cent below the September 1956 rate. Consumption of fibers other than raw wool averaged 5,681 thousand pounds per week, or ten per cent below the August average but 11 per cent above September 1956. On October 1, 1957, carpet wool stocks were 35.0 million pounds (scoured basis) compared to the 34.5 million pounds on July 1 and 40.8 million pounds on October 1, 1956. These figures are based on a survey conducted by the Bureau of the Census in co-operation with the Carpet Institute.

Cotton Consumption Off, Spindle Activity Up

The Bureau of the Census has reported that the total consumption of cotton in the U. S. for the month of September 1957 was 659,651 running bales. This total is below the 666,549 bale total for August 1957 and the 825,303 bale total for September 1956. Of the total consumption for the month of September 1957, cotton-growing states used 631,191 bales and New England used 24,510 bales. Both of these figures are somewhat below the August 1957 figures and sharply off the September 1956 totals of 783,966 and 36,355 respectively.

Spindle activity of cotton system equipment amounted to 9,171 million spindle-hours during September 1957 which is an improvement over the 9,123 million spindle-hours operated in August 1957. Both figures, however, are far below the 11,446 million hours operated during September 1956. Daily average consumption in the Big Four cotton textile states for the month of September was reported to be: (1) North Carolina—9,848 bales; (2) South Carolina —9,188 bales; (3) Georgia—6,363 bales; and (4) Alabama—3,731 bales.

Stocks of cotton in warehouses amounted to 10,731,661 bales in September 1957 as compared to 10,319,886 bales in August 1957 and a whopping 15,232,628 bales in September 1956. Cotton consuming establishments held greater stocks during September 1957 with 1,079,895 bales as compared to the 993,041 bales in August 1957 and 896,125 bales in September 1956.

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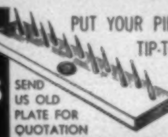

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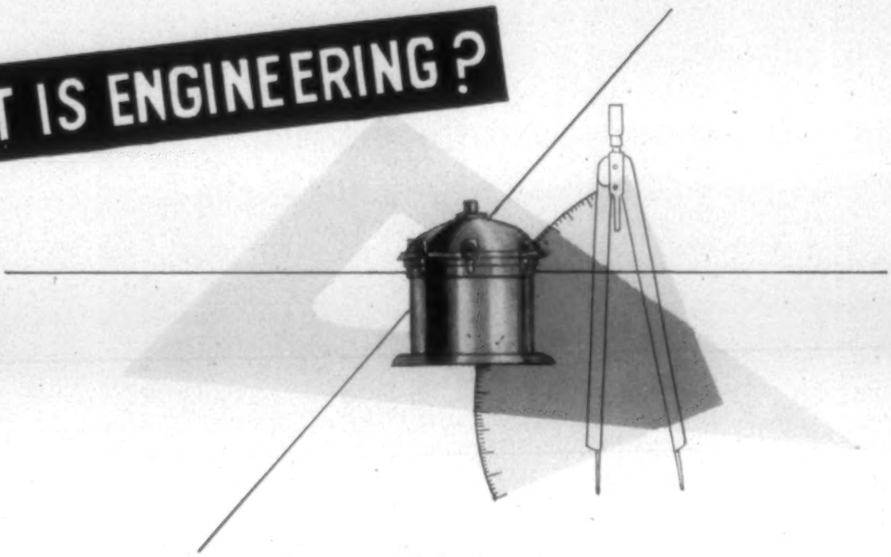

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